

COUNTY OF DUMFRIES.

FORTY-THIRD

ANNUAL REPORT

UPON THE

Health and Sanitary Condition of
the County.

1933

AND

**Report on School Medical Inspection
and Treatment**

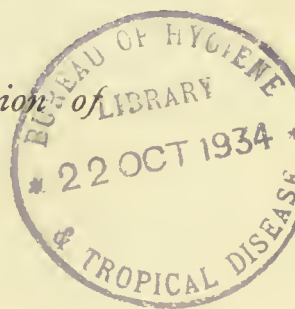
For Year ending 31st July, 1934,


BY

JOHN RITCHIE, M.B., Ch.B., M.R.C.P.Ed., D.P.H.,
County Medical Officer.

DUMFRIES :

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JOHN RITCHIE, M.B., Ch.B., M.R.C.P.Ed., D.P.H.

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(*obit* 5.2.33).

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(a) *Public Health.*

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MARY A. MUIRHEAD (Typist).

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MARY B. CARRUTHERS, „ (resigned).

ELEANOR SCOTT, „

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(b) *Public Assistance.*

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ALEX. KIRKPATRICK, P.L.D.

HENRY G. WILSON.

M. E. B. FARISH (Typist).

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JOHN JACKSON, Cert. of Roy. San.

Instit. ... (2) Thornhill District.

PETER M. ANDERSON, P.L.D. ... (3) Sanquhar District.

ROBERT BELL ... (4) Annan District.

HARRY W. BRYSON ... (5) Gretna District.

WM. CRUICKSHANK, Cert. of Roy. San.

Assoc. Scot. ... (6) Lockerbie District.

JOHN SANSON, Cert. of Roy. San. Assoc. (7) Moffat District.

A. A. OLIVER, Cert. of Roy. San. Assoc. (8) Langholm District.

To

The Department of Health for Scotland.

The County Council of Dumfries.

Ladies and Gentlemen,

I have the honour of submitting my Report for 1933, being the Forty-third Annual Report on the Health and Sanitary Conditions of the County of Dumfries.

I also submit the Report on School Medical and Dental Inspection and Treatment for the year ending 31st July, 1934.

I am, Ladies and Gentlemen,

Your obedient Servant,

JOHN RITCHIE,

Medical Officer of Health.

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REPORT.

VITAL STATISTICS.

Population.

The Registrar-General's estimate of the population in the County Landward and in the Small Burghs during 1933 is as follows :—

(a) County Landward	.....	.....	44,654
(b) Burghs—Annan	.....	.....	4,040
Sanquhar	.....	.....	1,776
Lochmaben	.....	.....	1,029
Lockerbie	.....	.....	2,612
Moffat	.....	.....	2,040
Langholm	.....	.....	2,438
			<hr/>
Total	.....	.....	58,589
			<hr/>

This total is an increase of 164 on that for 1932.

Births.

The number of births occurring in the County Landward and in the Small Burghs during 1933 with the corresponding rates were as follows :—

	Births corrected for transfers	M.	F.	Birth Rate	Per cent of illegitimate births
County Landward	..... 731	389	342		
Burghs—					
Annan	..... 72	38	34		
Sanquhar	..... 25	14	11		
Lochmaben	..... 23	14	9		
Lockerbie	..... 35	16	19		
Moffat	..... 23	12	11		
Langholm	..... 25	11	14		
<hr/>					
Total	..... 934	494	440	15·9	11·7

The total shews a decrease of 105 on that for 1932, and the birth-rate—15·9 per 1000—is 1·9 per 1000 lower.

Illegitimate births in the County Landward and Small Burghs numbered 109, or 11·7 per cent. of the total. This is 0·5 per cent. below the rate during 1932.

Deaths.

The number of deaths in the County and Small Burghs, corrected for transfers “in” and “out,” was 834. The death-rate, corrected and adjusted for age and sex distribution, was 12·5 per 1000, which is 0·8 per 1000 below that for the previous year.

The numbers, causes, and age-periods of deaths are shewn in the following table, arranged under the headings of the Short List of the Intermediate International List of Causes of Death as adapted for use in Scotland :

	All ages	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-
Scarlet Fever	1	...	...	...	...	1	...	...	...	...	...	...	...
Whooping-cough	6	4	1	...	...	1	...	...	...	...	...	...	...
Diphtheria	2	...	...	...	...	1	1	...	...	...	...	...	...
Influenza	52	1	...	...	...	2	...	4	9	5	14	15	2
Cerebro-Spinal Fever	1	...	...	...	...	1	...	...	...	...	...	...	...
Other Epidemic Diseases	2	...	...	...	...	1	...	...	1	...	...	...	...
Respiratory Tuberculosis	25	...	...	1	...	5	7	4	4	1	3	...	...
Other Tuberculous Disease	16	2	5	4	...	1	...	3	1	...	...	...	...
Other Infectious and Para- sitic Disease	1	...	...	...	...	...	...	...	...	...	1	...	...
Cancer (Malignant Disease)	94	...	...	...	...	1	2	2	13	17	30	28	1
Diabetes Mellitus	9	...	...	1	1	...	...	1	2	2	2	...	...
Other General Diseases	10	...	...	...	...	1	1	2	...	2	2	2	...
Cerebral Hæmorrhage	138	...	...	...	...	1	1	...	4	25	57	43	7
Other Diseases of Nervous System and Sense Organs	30	5	1	1	...	2	2	2	2	8	6	1	...
Heart Disease	150	...	...	...	1	...	3	2	13	25	53	42	11
Other Circulatory Diseases	23	...	...	...	...	...	1	...	...	3	6	11	2
Bronchitis	31	5	...	...	...	...	...	1	1	2	6	14	2
Pneumonia (All Forms)	46	13	6	...	...	...	3	5	3	7	5	4	...
Other Respiratory Diseases	9	1	...	...	...	...	...	...	2	2	3	1	...
Gastric and Duodenal Ulcer	7	...	...	...	...	...	1	...	...	...	...	...	...
Diarrhœa (All Ages)	10	3	...	1	...	...	1	...	...	1	3	...	1
Appendicitis	2	...	1	...	...	...	...	...	1	...	...	...	...
Diseases of Liver	4	...	...	...	...	...	...	1	1	...	2	...	...
Other Digestive Diseases	11	...	1	...	...	1	...	2	1	1	2	3	...
Acute and Chronic Nephritis	27	...	...	...	...	...	...	...	2	5	10	7	3
Diseases of Genito-Urinary System	10	...	...	...	...	...	...	1	1	4	...	4	...
Puerperal Causes	4	...	...	...	...	1	2	1	...	...	...	...	...
Diseases of Skin and Loco- motor System	1	...	...	...	...	...	1	...	...	...	...	...	...
Congenital Debility, etc.	33	37	1	...	...	...	...	...	...	...	...	...	...
Old Age	22	...	...	...	...	...	...	...	...	...	4	10	8
Suicide	2	...	...	...	...	...	1	...	...	1	...	...	...
Other Violence	33	1	1	4	...	7	2	...	6	4	6	2	...
Ill-Defined or Unknown	17	1	...	1	...	...	...	1	1	4	3	6	...
All Causes	934	73	17	13	2	27	29	34	70	120	218	194	37

Of the total of 834 deaths, 73 were of infants aged less than 1 year. The infantile mortality is 78 per 1000 births. This is 18 per 1000 above that for the previous year, which was abnormally low, but below the 1933 rate for Scotland, which was 81 per 1000 births.

Deaths of mothers from diseases and accidents of pregnancy and parturition numbered 4, which is equal to a rate of 4.3 per 1000 against a rate of 5.9 for all Scotland.

The death-rate from all forms of tuberculosis was 0.7 per 1000. This is a reduction of 0.04 per 1000 on the previous year, and is 0.1 per 1000 below the rate for all Scotland.

A. GENERAL.

No general change in administration affecting the Public Health Department was made during the year.

The boundaries of a number of special water supply, drainage, lighting, and scavenging districts were adjusted, so that they should, so far as possible, be the same in respect of all services provided. New special lighting districts were formed in Gleneapple, Penpont, and Ecelefechan.

The Public Health Committee instructed that the Local Government Officer for Gretna district should be stationed at Gretna, instead of at Kirkpatrick-Fleming, but later rescinded that instruction, so that the officer still remains at Kirkpatrick-Fleming, which, though more central geographically, is for administrative reasons less convenient than Gretna.

B. GENERAL ENQUIRIES.

No general enquiries were undertaken other than those found necessary in the course of routine work.

C. WATER SUPPLIES.

Special Water Districts.

BANKSHILL.—As noted in last year's report (p. 6) this district was extended and certain capital works carried out.

During spring and summer, shortage of water was reported on several occasions, this being partly attributable to deficient rainfall, and partly to the fact that on so small a system the effect of such bursts or leaks as may occur from time to time is disproportionately great. The supply to Burnhead House—the district supply is the overflow from this—was augmented during the summer by the incorporation of an additional spring, and the supply was adequate during the latter part of the year.

BLACKSHAW.—The springs which supply this district proved quite adequate, despite the very dry summer. Nevertheless, complaints of shortage from the higher parts of the system were received nearly every month. This shortage was due to the occurrence of bursts in the lower parts. As noted in last year's report, this is a constant source of trouble in the district, and is presumably due to the fact that some of the piping is very old. One group of houses—Wardlaw Mains—is practically always without a supply. It lies at the extremity of the pipe line, and the pressure is insufficient to carry the water up to the houses. A better supply for this district is urgently needed.

CRAWICK.—As noted in last year's report, the main pipe supplying this district was found to be badly encrusted, and this resulted in the pressure at certain parts being very poor. A new cast-iron main, approximately 550 yards in length, was laid, and since then sufficient pressure has been obtained.

DUMFRIES LANDWARD.—Nothing requiring comment was reported during the year.

EAGLESFIELD.—The supply held out, despite the dry season, but it was noted at the end of the year that the output of the springs was diminishing.

ECCLEFECHAN.—The supply held out well during the summer, but diminished later. On 1st November the yield of the springs was calculated to be 7872 gallons per day less than on 14th July. Towards the end of November the supply to the higher points of the system failed, and

was still intermittent, though improved, at the end of the year.

GLENCAPLE.—This supply is generally unsatisfactory in hot summers, and proved markedly so during 1933. The supply comes off an unsatisfactory gathering ground, and the water is unfiltered. Vegetable growth is apt to be excessive.

During June the level in the reservoir fell by about three feet, and there is no doubt but that the supply would have been quite inadequate during the late summer had the consumpt remained at its usual figure. The quality of the water, however, was so bad that many consumers resorted to old wells rather than drink the district water—a fact which is not surprising in view of some of the analyses made during the summer. (See p. 119.)

This supply has been recognised for many years as a very unsatisfactory one, and it would be of great advantage to the district if it could be replaced by water of better quality.

KIRKCONNEL.—A new apparatus for regulating the dosage of alumina to three of the mechanical filters was brought into use at the beginning of the year, and resulted in a considerable improvement in the filtered water.

One of the meters had to be dismantled and sent to the makers for repair. During this time only three of the six mechanical filters were in operation, but no material deterioration of the filtered water resulted.

The "Old Supply" is now distributed only to a small part of the district, but this includes the pit-head baths. Some complaints were received in the latter part of the year regarding discoloration after rainfall, and steps were taken to remedy this. It is doubtful, however, whether those have been altogether successful.

LOWER ANNANDALE.—In view of the serious disturbance which had been caused to this supply in recent years through heavy flooding in the gorge between Minsca and the reservoir, a report was obtained from Messrs Warren & Steuart, C.C.E., Glasgow, as to the works

necessary to prevent a recurrence of the trouble. It was decided to construct a dam at the top of the reservoir to protect it from flood water and to prevent the bye-pass becoming choked with gravel during spates. In addition, repairs to the piers and gangway, and to the bye-pass channel, were authorised.

Shortly after the work had been commenced a cloud-burst occurred over the drainage area, and a heavy spate broke over the top of the reservoir, filling it with very discoloured water. As the discoloration was due to clay in exceedingly fine suspension it took a long time to clear up, and the water, though containing nothing dangerous to health, had a milky appearance which made it very unattractive.

As the constructional works progressed, it became necessary to lower the level of the water in the reservoir. In an ordinary year this would have caused no inconvenience to consumers, but unfortunately the summer of 1933 was far from ordinary, so far as rainfall was concerned, and the persistent drought resulted in a steady fall of the water level in the reservoir. So early as June some of the highest subjects in the district had a restricted supply, by the end of October the water in store at Torbeckhill had fallen below 20 million gallons—that is, to less than a third of the capacity of the reservoir—and about half the district was experiencing a shortage.

The engineers were asked to report on the practicability of bringing water from certain springs on Howats Hill to the reservoir, but in view of the small amount of water available and the engineering difficulties involved no action was taken.

In November the shortage in the Hecklegirth area became so acute that an arrangement had to be made with the Town Council of Annan for a temporary supply from the burgh system—a supply which was promptly and generously given.

In view of the persistent low pressure and consequent poor supply at certain subjects in the higher part of the district, notably at Jockstown and Uppermoor, it was

decided to lay a duplicate main, 7 inches in diameter and approximately 1670 yards in length, between Kirtlebridge and Breconbeds.

An important extension of the Lower Annandale district was made during the year. The proprietor of Springkell having intimated his readiness to convey to the County Council the whole of the water supply works, pipes, etc., used to supply water to parts of Springkell, estate not included in the special water supply district, the Council determined to extend the boundaries of the district to include the estate and certain other areas in the vicinity which were in need of water. In addition, a portion of Hoddum, lying south of the Mein Water, and which formed an enclave between the Ecclefechan and the Lower Annandale Districts, was added to the latter.

The total area of the district is now 47,219, and the population approximately 8500. Although the population supplied from the Torbeckhill reservoir has not increased materially since the district was originally formed, the consumpt of water has. There has been a considerable development of dairy farming throughout the area, and this entails the use of a great deal of water for cooling milk, washing out byres, milk-houses, and so forth. It is questionable whether the sand filters at Torbeckhill are of sufficient size to meet the demands now being made on them. As the draw-off increases, water must pass more rapidly through the filters, and a point is eventually reached at which the efficacy of filtration is reduced. It therefore becomes necessary to increase the filtering area in order to enable the increased volume of water to pass sufficiently slowly for proper filtration. This is a matter which will have to be considered at Torbeckhill in the comparatively near future.

MONIAIVE.—Shortage was experienced during the summer, and water had to be rationed for considerable periods. Failure of supply in this district is not due to

inadequacy of the gathering ground or to insufficient storage, but to the extremely high consumpt, which apparently is due to leaks in the distributing piping. During December the daily draw-off was equal to the absurd figure of 118 gallons per head—more than twice what there can be any possible justification for. Attempts to locate leaks are constantly made, many have been found and remedied, but the age of the distributing piping, the absence of any accurate plan of its lay-out, and the fact that most of the village is built on water-bearing gravel make detection very difficult.

NETHERWOOD, KELTON, AND CRAIGS.—Serious shortage was experienced in this district in consequence of the prolonged drought. The supply is derived from the Rockhall estate system, and is conducted across the moss by a pipe about two and half miles in length. The storage available at the estate reservoir is insufficient for the calls now made upon it. This is a district for which the provision of a more adequate supply is a matter of urgency.

PENPONT.—A fall of pressure was observed during April, and was ascribed to obstruction in the pipe between the spring and the collecting tank, as the level in the former was maintained. Investigations were made, and it was found that the rose on the pipe conveying water from the “old” spring had become choked with roots. Those were cleared away and the pressure improved.

In consequence of the drought it was necessary to ration the supply of water during the latter part of the summer.

RUTHWELL AND RAFFLES.—In consequence of complaints regarding lack of pressure at Howthat and Slethat farms a special report was obtained from Messrs Warren & Stuart. The water supply did not actually fail during the dry summer, but the amount in store was so far reduced that none was available for systematic scouring or sand washing at the filters. Complaints of a rather unusual sort were received about the presence of eels in

the supply pipes. Those caused trouble, not only by blocking the pipes, but also by dying, decomposing and tainting the water. It was discovered that some eels had got into the clear water tank, and had passed through a badly fitting rose into the circulation. The rose was replaced, and complaints ceased.

Through some curious misunderstanding the sand filter was emptied and rebuilt at a time when sufficient water to wash the old sand was not available. It had to be made up with such new sand as was in store. This was not sufficient to make a filter bed of sufficient thickness, and for some time the district had to depend on water which was not properly filtered. Fortunately no ill-effects were reported.

ROWANBURN.—This supply held out well till September, when it diminished to a considerable extent. It was not found necessary to restrict the service to consumers, but the amount used for flushing the village sewers had to be curtailed. A full supply was again available by November.

Damage to the covers of the main spring and collecting well was reported in December, and referred to the Buildings and Works Committee for attention.

The results of chemical and bacteriological analyses of samples of water from the Special Districts will be found on pages 118-120.

SUGGESTED NEW DISTRICTS.—Requisitions were made, in accordance with the provisions of Section 131 of the Public Health (Scotland) Act, 1897, by ratepayers in Beattock and in Dunscore, asking the Council to consider the propriety of introducing public water supplies into those places.

Reference has frequently been made to the need for a better supply at Beattock. Many reports have been made by engineers, a suitable source selected, and plans prepared. So far, however, it has proved impossible, in view of the small valuation in the area, to carry out

works at a cost which could be met by the imposition of a reasonable rate.

Dunscore has been a problem for many years. Its main existing supply is a dip well, inconveniently situated, insufficient for modern requirements, and obviously open to pollution. Numerous attempts have been made to find a sufficient supply at a short distance from the village, but none has been found of adequate amount and sufficiently near to permit of its being utilised at a reasonable cost. Investigations were again undertaken last autumn, and a number of springs near Springfieldhill were traced to their sources and gaugings taken. Those, unfortunately, proved insufficient for the requirements of the village. Investigations as to the possibility of including Dunscore in a larger water district are still proceeding.

A report by Messrs Warren & Partners was submitted dealing with the proposed formation of special water supply districts in Closeburn and Thornhill. The Committee approved the suggestion that both those areas be combined in one district. Since that time it has been proposed that a considerably larger area should be supplied. The practicability of this will depend on the policy adopted by the Government regarding rural water supplies.

Impressed by the importance of the problem of water supply in rural areas, and anxious that all relative information should be at the disposal of the Government, the Public Health and Public Assistance Committee instructed the preparation of a Memorial dealing with the special aspects of the question which affect Dumfriesshire. This Memorial, which was submitted in due course to the Secretary of State for Scotland, was in the following terms :

MEMORIAL
TO
THE RIGHT HONOURABLE THE SECRETARY OF STATE
FOR SCOTLAND
BY
THE COUNTY COUNCIL OF THE COUNTY OF DUMFRIES
REPRESENTING

- (1) the necessity for improved and adequate water supply, primarily for domestic purposes, over large parts of the county ;
- (2) the necessity for drainage in villages in the county ;
- (3) the impossibility of providing adequate water supply in these parts of the county and drainage in these villages solely by means of rates, on the rateable lands and heritages, of amounts per £1 which the council would be justified in levying : and
- (4) the difficulty, in the absence of adequate water supply in such parts of the county and of drainage in such villages, of either (a) providing therein new houses of the present day standard including suitable sanitary conveniences and drainage, or (b) insisting on existing defective houses therein being improved up to that standard.

1. For years prior to the constitution of the original county council (and of the now extinct district committees) under the Local Government (Scotland) Act, 1889, the provision of water supply in their districts appears to have been the subject of much consideration by the previous public health local authorities (*i.e.*, the parochial boards of parishes) in at least the two parishes of Dumfries and Caerlaverock. Shortly prior to 1890 the local authority of Caerlaverock (in accordance with the then legislation which corresponded with section 131 of the present Public Health (Scotland) Act, 1897) formed a special water supply district, known as Blackshaw special district, in their parish. The supply for that special district was

pumped from a source practically on sea level, and cannot be said to have ever been really efficient. It is still pumped, and is now distinctly inefficient and disproportionately expensive.

2. Before 1890 no other parish local authority had provided a water supply for their district or for any part of their district. But gravitation water supplies had previously been provided otherwise for the following villages and material areas in the landward part of the county—

- (1) about seventy years ago, by the proprietor for the village of Thornhill and a considerable adjacent area in the parish of Morton ;
- (2) about or shortly after that time, by the proprietors for a considerable part of the large estate of Closeburn in the parish of that name ; and
- (3) shortly after that time, by the proprietors or others interested for the six villages of Eaglesfield, Penpont, Kirkconnel, Moniaive, Ecclefechan, and Rowanburn.

So far as known, water supplies, other than separate water supplies to individual houses, had not been provided in any other parts of the county prior to the constitution of the county council in 1890. The supplies under (1) and (2) continue, but the pipes and apparatus are now practically worn out and the supplies have become inadequate and inefficient. The provision, at a reasonable rate or rates, of adequate supply in these two areas is part of the water problem with which the county council are now faced. The supplies in the six villages mentioned in (3) were from time to time found inadequate and special water supply districts were formed and new supplies, or augmentations of the original supplies, introduced in Eaglesfield in 1890, in Penpont in 1891, in Kirkconnel and in Moniaive in 1898, in Ecclefechan in 1911, and in Rowanburn in 1920. An entirely new supply became necessary and, with the assistance of an unemployment grant as aftermentioned, was provided for Moniaive in 1928-30.

3. Subsequently to 1890 and prior to 1910 gravitation water supplies were provided by private effort by the proprietors for the large estates of (1) Springkell covering parts of the parishes of Half-Morton, Kirkpatrick-Fleming, and Middlebie, (2) Kinmount in the parish of Cummertrees, (3) Craigs in the parishes of Dumfries and Caerlaverock, (4) Rockhall in the parishes of Mouswald and Torthorwald, and (5) Halleaths in the parish of Lochmaben. The supply for the Netherwood Kelton and Craigs special water supply district aftermentioned is obtained from the reservoir of the Rockhall private scheme. Private supplies for other material areas do not appear to have been provided since 1890. In 1933 the Springkell supply has been taken over by the county council on the basis of no payment being made to the proprietor for the existing works, etc., and as aftermentioned the area supplied by that scheme has been included in the Lower Annandale special water supply district. The supplies for Kinmount, Craigs, Rockhall, and Halleaths have not proved satisfactory, and the proprietors have at various times indicated their willingness that the council should provide supplies for these areas. In each of these cases supply would be given under the large suggested scheme aftermentioned.

4. There are now in the county sixteen special water supply districts formed in terms of section 131 of the Public Health (Scotland) Act, 1897, or of prior legislation of similar effect. These districts are delineated on the Ordnance Map of the county submitted herewith. A list of them is appended (Appendix I.) showing their dates of formation and approximate areas in acres and, for the year 1932-33, their gross and rateable annual values, the amounts of their special water supply rates, their expenditure on water supply and the percentages of their total expenditures which the rates and taxes on the water undertakings represent. The several special water supply and special drainage rates are of course levied, in addition to the county consolidated rate of nine shillings

per £1, on the rateable annual values of the lands and heritages within the special district. It must not be inferred that each of these sixteen water districts has a satisfactory supply: in two (Dalton and West Canonbie), owing to the cost having been found prohibitive, supplies have not been introduced; in several the supplies are now definitely insufficient and unsatisfactory; and in certain of the others the supplies are so liable to interruption during droughts, or otherwise so doubtful, that the districts would unquestionably be served much better if they were merged in the suggested large special water district aftermentioned.

5. Adequate water supply for the large area of flat, low-lying land along the Solway seaboard and running long distances up the valleys of the rivers Annan and Nith could not be provided otherwise than by gravitation. Supply was provided for most of the portion of that large area which lies between the rivers Annan and Sark by the formation in 1910 of the Lower Annandale special water supply district. When formed, that water district consisted of the parishes of Annan (exclusive of the burgh of Annan), Dornock, and Gretna, and parts of the parishes of Half-Morton, Kirkpatrick-Fleming, Middlebie, and Cummertrees. Water supply was provided in 1911-12 for that special district at a capital cost of £71,500. That district supply was efficient till, at the end of the war, the Ministry of Munitions left, in the townships they had created for war purposes at Gretna and Eastriggs and practically at the extreme ends of the water mains, increases of population equal to 49 per cent. of the pre-war population of the special water district. Augmentations of the water supply to meet the needs of that additional population have, with the assistance of unemployment grants, been provided at a capital expenditure of slightly over £50,000. The boundaries of that special district were extended in 1933 to include the estate of Springkell already mentioned and also a part of the parish of Hoddam. That extension of area will involve further capital expenditure exceeding £6000. To provide adequately for the

apparently increasing needs of this special district, additional storage at one of the two sources of supply will probably be necessary in the near future. The following shows the produce of a rate of one penny per £1 on the rateable annual value of the special district, the amounts of (a) the special water rate actually levied in each of the years from 1931 to 1934, and (b) what these rates would have been in these years had the unemployment grants in respect of part of the post-war expenditure not been received :—

Year.	Produce of 1d per £.	Rate actually levied.	Unemploy- ment Grant.	Rate equal to Grant.	Rate necessary without Grant.
1931-32 ...	£156 1 9	3s 4d	£879 4 10	5-6d	3s 9-6d
1932-33 ...	155 16 11	3s 3d	879 4 10	5-7d	3s 8-7d
1933-34 ...	156 5 7	3s 2d	879 4 10	5-6d	3s 7-6d

As the Lower Annandale special water supply district was in existence at the date of the passing of the Local Government (Scotland) Act, 1929, Government de-rating grant is received annually of an amount assumed to be equal to the loss, by reason of the de-rating of agricultural, industrial and freight transport subjects, of the special water supply rate levied within the special district. Taking the average year 1932-33 as an example, the amount of the de-rating grant received was £3151. That grant admitted of the expenditure being met by the rate of 3s 3d per £1 on the rateable (*i.e.*, de-rated, where so required) valuations of the subjects within the special district. Had de-rating grant not been received in this case a rate of 5s 0d per £1 would, notwithstanding that a large proportion of the loans has been repaid, have been necessary in that year on the rateable value of all the subjects in the special district for the purpose of meeting the same expenditure. While that rate would have been levied and been payable on the gross valuations of the non-de-rated subjects, the amount payable in respect of de-rated agricultural subjects (*i.e.*, the produce of a rate of 5s 0d per £1 on one-eighth only of the gross

valuations) would have been equal to the produce of a rate of $7\frac{1}{2}d$ per £ on the gross (or non-de-rated) valuations of the last mentioned subjects.

6. The remainder of the large, flat, low-lying area referred to in the immediately preceding paragraph may be described roughly as being bounded by (1) the Solway, (2) the rivers Nith and Cairn up to Dunscore, (3) a line from Dunscore via Keir and Penpont to Thornhill and thence via Closeburn, Kirkmahoe, Parkgate and Temp-land to the river Annan in the neighbourhood of Mill-housebridge, (4) a line following substantially the river Annan till that river crosses the western boundary of the Lower Annandale special water supply district, and (5) that western boundary to the Solway. A special water district so bounded would include the parishes or parts of the parishes of Dumfries, Holywood, Dunscore, Keir, Penpont, Morton, Closeburn, Kirkmahoe, Tinwald, Kirk-michael, Lochmaben, Dalton, Cummertrees, Ruthwell, Mouswald, Torthorwald and Caerlaverock, and would also include and supersede (1) the existing special water supply districts of Blackshaw, Glencaple, Dumfries (landward), Netherwood Kelton and Craigs, Ruthwell and East Raffles, and Dalton, and (2) the private schemes for the areas, other than Springkell, mentioned in paragraph 3 hereof. In practically all these special water supply districts and areas of private schemes the supplies are more or less inadequate and unsatisfactory. At various times since these special districts were formed and private supplies provided, schemes have been considered by the local authority under which these special districts and private scheme areas would have been merged in one or other of several suggested larger water supply districts. The exhaustive consideration which the whole subject has received in connection with these suggested schemes leads undoubtedly to the conclusion that supply for the large area above described, or a very substantial portion of it, would be most satisfactorily provided by one comprehensive scheme. The source of such a supply would

require to be at an altitude of not less than six hundred feet above ordnance datum. A suitable source, indicated on the accompanying Ordnance Map, would be Kettleton Burn in the parish of Morton. The boundaries of the large area which, it is thought, might be supplied satisfactorily from that source are provisionally and roughly indicated by red edging on that map. A tree of water mains which would probably be necessary for the supply of that area is appended (Appendix II.). The approximate length of these would be about 110 miles. In addition to these mains extensive branch pipes would be necessary. The capital cost of the scheme would probably be about £175,000. The gross and rateable valuations of such suggested special district would probably be about £132,000 and £50,000 respectively. An estimate of the annual expenditure in respect of the special district, if formed, in each of the first, fifteenth, and thirtieth years of supply is given in Appendix III. A. On these figures the following would probably be (1) the actual rate per £1 in each of the same years of supply, and (2) the average annual rate per £1 over the period of the loan, on each of the assumptions following:—

No.	Assumption.	Actual rates in years.						Average rate.	
		1		15		30			
(1)	Without de-rating grant or other assistance	s. 7	d. 5	s. 5	d. 11	s. 4	d. 5	s. 5	d. 11
(2)	With de-rating grant only	2	10	2	3	1	8	2	3
(3)	With unemployment grant only over total period of loan	5	7	4	1	2	7	4	1
(4)	With relief from county rate only over total period of loan	4	11	3	11	2	10	3	10

The differences between nos. (1) and (2) above illustrate again the effect of de-rating without de-rating grant.

7. Numerous previous schemes to provide, from many sources, water supply for parts of the large area referred to in the immediately preceding paragraph have

been considered fully by the local authorities and were rejected on the ground of inefficiency or prohibitive cost. Summarised particulars of these abortive schemes will be submitted if desired. As a further illustration of the effect of de-rating without de-rating grant being available, it may be mentioned that the annual cost of one of these rejected schemes (which would have involved a capital expenditure of £90,000) was estimated to be met by an average annual rate of 5s per £1 if that rate was levied as if de-rating had not been introduced, but that, in consequence of de-rating without grant equivalent to the loss of rates due thereto, it was found that it would be necessary to levy a rate of 13s 4d per £1 on the rateable valuation of all subjects in the proposed special district. While that high rate would have been payable in full on the gross valuations of all subjects not de-rated, the payment in respect of de-rated agricultural subjects would have been equal to the produce of a rate of 1s 8d only per £1 on the gross annual values of these de-rated subjects.

8. Especially since the war, the local authorities have considered many schemes for the provision of water supply for parts of the county outside the large seaboard area referred to in paragraphs 5 and 6 hereof but, except in the case of the village of Moniaive for which, as after explained, water and drainage were provided at costs involving very high rates, difficulties have been experienced which appeared to preclude proceeding with these schemes. The following may be cited as examples :—

- (1) In Moniaive, the existing supply having become very unsatisfactory, a new supply from a nearby source was, with the assistance of an unemployment grant, provided for the village during the years 1928-1930. Even with that grant this scheme would probably have been impracticable had it not been found possible to use the existing distribution pipes within the village, the works executed being limited to construction of the reservoir and the laying of the short water main therefrom to the village. In 1932-33

and 1933-34 the county council have, as authorised by section 33 of the Local Government (Scotland) Act, 1929, relieved this special water district of the county consolidated rate on the rateable annual value of the water undertaking. Drainage for Moniaive was considered to be as urgent as the new water supply and, also with the assistance of an unemployment grant, a drainage scheme was carried out during the same period. As regards drainage the county council have also relieved the special district in accordance with section 33 of the Act of 1929. The unemployment grants were sanctioned in 1929, but the first annual payments thereof were received in the financial year 1930-31. In this case, there being practically no de-rated subjects in the special district, de-rating without grant is immaterial. In addition to other particulars the following shows the amounts of (a) the water and drainage rates actually levied in each of the years from 1930 to 1934, and (b) what these rates would have been in these years had neither unemployment grant nor relief from the county rate been given :—

Service.	Year.	Produce of 1d per £.	Rate actually levied.	Unemployment Grant.	County Rate relieved.	Rate equal to Grant and County Rate	Total Rate necessary no assistan
Water ...	1930-31	£9 4 2	1s 3d	£166 6 3	...	1s 6d	2s 9d
Do.	1931-32	10 2 1	1s 9d	161 18 1	...	1s 4d	3s 1d
Do.	1932-33	10 13 1	1s 3d	161 18 1	£28 0 7	1s 5·8d	2s 8·8
Do.	1933-34	10 18 9	1s 3d	161 18 1	52 16 2	1s 7·6d	2s 10·0
Drainage	1930-31	9 4 2	3s 6d	313 18 0	...	2s 10d	6s 4d
Do.	1931-32	10 2 1	3s 6d	310 4 4	...	2s 6·7d	6s 6·7
Do.	1932-33	10 13 1	4s	310 4 4	56 11 4	2s 10·4d	6s 10·4
Do.	1933-34	10 18 9	3s 7d	310 4 4	61 4 7	2s 9·9d	6s 4·9

- (2) During the last thirty years numerous proposals to provide an adequate water supply for the village of Beattock have been considered and departed from on the ground of cost. A drainage scheme is now considered to be as urgently necessary as water supply.

In this case de-rating grant, if available, would not be of material amount. There have been proposals recently that about thirty-six houses should be erected in this village; but that is impracticable in the absence of a new and adequate water supply and a drainage scheme. In the calculations after-mentioned the increase of valuation arising from the suggested new houses has been assumed. Estimates of the expenditure on water supply and drainage are appended (Appendix III. B.). The rates necessary to meet that expenditure would, without de-rating grant, unemployment grant, or relief from the county rate, amount to 4s 1d for water supply and 3s 1d for drainage—a total of 7s 2d per £1 for these two services. The council could not contemplate the levy of rates of these amounts.

- (3) The village of Dunscore has always been dependent for water supply on a spring near the lowest point, and practically at one end, of the village and from which the water is carried considerable distances by the inhabitants. Many efforts have been made to solve the question. There does not appear to be any water available within such a distance that conveyance of it to the village by gravitation could, having regard to cost, be regarded as practicable. It has been suggested that the water of the spring above mentioned might be pumped to a point higher than the village and be conveyed to the individual houses by gravitation; but the volume of the spring is equal to about one-sixth only of the quantity necessary for a gravitation supply. If a separate water district were formed, the proposal would be affected materially by de-rating without de-rating grant. In a separate special district which was suggested recently most of the de-rated subjects are agricultural and would require large quantities of water for dairying purposes. Dunscore would be included in the suggested large water supply district described in paragraph 6 hereof.

- (4) As regards the Dalton special water supply district, for which a supply has not been provided, it was found, after the special district had been formed by the district committee in 1912, that the suggested source of supply was not satisfactory and that the rate appearing necessary was unduly high. This area could also be included in the suggested large water district.
- (5) In the case of West Canonbie the circumstances were similar. After the special district had been formed and the finances examined it was found that a water rate of 9s 7d per £1 was necessary. Consequently the scheme was not proceeded with.

9. The inability of the council and their predecessors to provide, at reasonable rates, adequate water supplies for large parts of the county, and especially for rural parts such as the large area described in paragraphs 5 and 6 hereof, seem to arise from—

- (1) The distances between premises to which supplies for domestic purposes require to be conveyed.
- (2) The long distances between any source of efficient supply and the houses and premises to be supplied.
- (3) The large increase in the quantity of water required in each district due to the more general introduction of baths and water-closets.
- (4) The great extension of dairying and the large quantities of water now required therefor and in particular for the cooling of milk.
- (5) The post-war increase in the capital cost of water supply works.
- (6) A large proportion of the lands and heritages within the proposed area of supply being "de-rated" and paying the necessary water supply rate on one-eighth only of their total annual values per the valuation roll.
- (7) No government grant being allowed to make good, in special water supply districts formed after the passing of the Local Government (Scotland) Act,

1929, the loss of special water supply rates arising from de-rating.

- (8) The large transfer, by reason of de-rating without grant equivalent to the loss of rates, from de-rated subjects to subjects not de-rated of liability for the cost of water supply provided for all these subjects in common.
- (9) The large percentage of the expenditure on water supply in special water supply districts which is represented by the taxes and the ordinary county rate levied on the annual value of the water undertaking.
- (10) Loans to meet the capital cost of water supply works requiring to be repaid within the maximum period of thirty years while the life of the works may fairly be regarded as equal to practically double that period.
- (11) Drainage schemes being necessary, especially in villages such as Moniaive, Beattock and Dunscore, almost as a corollary of an adequate water supply.

10. The council have been urged by Parliament and the Central Government Authorities to provide additional houses of the present day standard and to secure the improvement of existing defective houses up to that standard. They agree that such houses and improvements are necessary; but schemes for the provision and improvement of houses must, in their view, be considered in relation to the supplies of water available for domestic and sanitary purposes where such houses and improvements are suggested. The following may be mentioned as illustrations of the impossibility, in the areas above alluded to, of dealing with the questions relative to housing in advance of solution of the water supply problem :—

- (1) The erection by the council of twenty-eight houses in the village of Thornhill is alleged to have caused, or to have contributed materially to, the present inadequacy of the water supply in that village and the adjoining area.
- (2) The council intended to demolish seventeen houses in the parish of Closeburn and, in lieu thereof, to

erect new houses in that neighbourhood, but the proposal has had to be postponed in consequence of the absence of adequate water supply for the new houses should these be erected.

- (3) It was proposed to the council that twenty-three houses should be erected at Heathhall in the parish of Dumfries and at Collin in the adjoining parish of Torthorwald, but the water supplies at these places being quite inadequate the erection of these houses has similarly been postponed.
- (4) As previously indicated it was proposed that between thirty and forty houses should be erected in Beattock, but as the present water supply is insufficient for the existing houses in that village, the proposal cannot proceed until a new water supply and a drainage system have been provided.

The places mentioned under (1), (2), and (3) of these illustrations are within the area of the suggested special water supply district described in paragraph 6 hereof. Similar circumstances obtain throughout most of that suggested water district and in other parts of the county where additional houses and improvements of existing houses are necessary.

11. Having detailed not only (1) the extensive defects of the water supplies in the county and the insuperable difficulties of making good these defects with the produce of water rates of amounts it would be reasonable to levy, but (2) the impossibility of providing additional, and improving existing, houses until adequate water supplies are available, the council deem it their duty to urge—

FIRST.—That provision be made by statute for payment, in the case of special water supply and special drainage districts formed after the passing of the Local Government (Scotland) Act, 1929, of government grant equal in amount to the local authority's loss by reason of the special water supply and special drainage rates in such special districts being levied on the de-rated annual values of the agricultural, industrial

and freight transport subjects therein instead of on the gross annual values of these subjects.

SECOND.—That, as regards water supply and drainage works of proved necessity especially in rural areas, provision be made for government grants in respect of the employment in the execution of such works of able-bodied unemployed men who would otherwise be in receipt of maintenance allowances from public funds, such grants to be of not less amount nor of shorter duration than the corresponding unemployment grants available during the years 1924 to 1931.

THIRD.—That, as regards special water supply and special drainage districts in which water supply and drainage works of proved necessity are executed with the assistance of government unemployment grants, provision be made by statute for county councils relieving, in terms of section 33 of the Local Government (Scotland) Act, 1929, such special districts of the county rate on the annual values of their water supply and drainage undertakings to an extent not less in amount in any year than the government unemployment grant towards the cost of water supply and drainage works therein.

FOURTH.—That it be considered whether provision should not be made by statute for—

- (1) some reduction of the rateable annual values of the water supply and drainage works within special water supply and special drainage districts ; and
- (2) extension from thirty to, say, forty years of the period for repayment of loans for water supply and drainage works in special water supply and special drainage districts.

By authority of the council,

HUGH S. GLADSTONE, *Convener.*

J. H. MILNE HOME, *Vice-Convener.*

JOHN ROBSON, *County Clerk.*

Dumfries, 1st November, 1933.

APPENDIX I.

Return, as regards each of the special water supply districts in the county of (1) the year of formation, (2) the approximate area in acres, and (3) for the year to 15th May, 1933, of (a) the gross annual value, (b) the rateable annual value, (c) the special water supply rates per £1, (d) the total revenue expenditure, (e) the rates and taxes included in the revenue expenditure, and (f) the percentage of the amount of rates and taxes to the total expenditure.

Name of Special District.	Year of formation.	Approximate area in acres.	Gross Value.	Rateable Value.	Rates per £.	Revenue Expenditure.	Rates and Taxes.	Percentage of rates and taxes to total expenditure.
Bankshill ...	1890	96	£241	£127	1s 6d	£7	...	...
Blackshaw ...	1890	5,459	2,927	607	1s 3d	151	£35	23·2
Eaglesfield ...	1890	81	2,157	2,065	2d	66	7	10·6
Penpont ...	1891	43	1,421	1,344	1s 2d	66	16	24·2
Glencaple ...	1896	25	1,201	1,147	5d	28	5	17·8
Crawick ...	1898	23	465	391	1s 1d	38	4	10·5
Kirkconnel ..	1898	183	11,795	11,223	2s 1d	1,236	402	32·5
Moniaivo ...	1898	175	2,794	2,544	1s 3d	378	39	10·3
Dumfries (L.) ...	1899	52	987	829	1s 5d	62	...	...
Netherwood ...	1899	2,340	3,167	1,121	8d	119	47	39·4
Ruthwell ...	1900	10,378	8,009	2,212	1s 3d	457	185	40·4
Lower Annandale	1910	34,912	68,862	38,589	3s 3d	10,064	3334	33·1
Ecclefechan ...	1911	7,566	10,732	3,901	2s 2d	809	282	34·8
Dalton ...	1912	1,495	872	396	...	...	...	...
Rowanburn ...	1926	33	443	414	1d	12	...	...
West Canonbie ...	1920	1,478	1,272	223	...	...	...	...
Dumfries, 1st November, 1933.						£13,493	£4356	32·2

(Appendices II. and III. are omitted).

D. & E. DISPOSAL OF SEWAGE AND POLLUTION OF RIVERS.

(I) NITHSDALE.—No instance of serious pollution by coal washings was reported from the upper reaches of the Nith during the year.

Less trouble was experienced at Moniaive Sewage Works than in the previous year, but this is merely on account of the prolonged drought and consequent absence of flooding. A severe flood, however, had occurred in the beginning of January, and a number of houses were inundated. A petition was presented, signed by a number of persons in the village, drawing attention to the inconvenience caused to them by the flooding and the defects in the drainage system for the Moniaive special drainage district. The public health committee, after consideration, pointed out that they had no responsibility for the flooding of houses, and were taking action regarding the defects in the sewers.

The Thornhill sewage works continue to give a satisfactory effluent. Those at Kirkconnel and Sanquhar have also functioned well.

The septic tank at Penpont was uncovered and emptied. It is a primitive affair, being little more than a subterranean trough, with a number of baffles which catch the heavier solids. As a means of sewage purification it is practically negligible, and the effluent passing from it is very unsatisfactory. Fortunately, it becomes highly diluted on passing into the Scaur Water and, beyond leaving an unsightly deposit on the bank at the point of discharge, is not productive of nuisance. This fouling of the bank might be avoided by carrying the discharge pipe out into the stream, so as to permit of immediate dispersal and dilution of the effluent. The whole sewage system, however, is old, there is no reliable plan of the lay-out, and the condition of the sewers and connections is unknown. If new houses are built, or existing houses reconstructed, at Penpont on any considerable scale it will be necessary to have the whole sewage disposal system overhauled.

As the Wanlockhead mines were closed down during the year the question of pollution of the Wanlock Burn with lead did not arise.

(2) ANNANDALE.—Investigations were continued at Lockerbie sewage works with a view to reducing the pollution of the Turnmuir burn. While it cannot yet be said that the problem has been solved, a distinct improvement was observed last summer, despite the fact that in consequence of the drought the volume of the stream was less than usual.

The sewage works at Eaglesfield and at Ecclefechan gave satisfactory effluents. The outfall at the latter requires periodic attention, as the Mein, into which it discharges, is apt to change its course, and it has been necessary, on occasion, to cut channels through the gravel, in order to ensure that the effluent is carried direct into the current.

(3) ESKDALE.—Nothing calling for comment arose during the year.

There are certain villages throughout the county still unprovided with sewage disposal works, in which improvement in housing is gravely hampered by the lack of facilities for introducing sanitary fittings. In some of these the primary necessity of a sufficient water supply is also lacking—as, for example, in Beattock, where the water problem has long been acute, or Collin, where the existing supply is not sufficient for the extra consumpt which sewage works would entail. In others, where gravitation water is available, the cost of providing sewage works is greater than the valuation of the district could bear. Brydekirk and Crawick are cases in point. Such cases, I suggest, support the view which I have often expressed that it is mere waste of time to discuss or legislate regarding rural housing until the primary necessities of water supply and drainage have been provided.

A point to which attention must be drawn is the number of rural schools still unprovided with proper sanitary facilities. A list is given in the portion of this report

which deals with Medical Inspection and Treatment of School Children, shewing the schools without a water carriage sewage system.

This is a matter which surely has an educational as well as a hygienic significance. It is generally assumed that, amongst the numerous accomplishments which the modern child may acquire at school, an elementary knowledge of hygiene should properly find a place, nor indeed is it unreasonable to suggest that the inculcation of a decent standard of living should be one of the objects of education. But lessons on the theory of hygiene, however convincing, delivered by the most able and enthusiastic of teachers, must lose something of their effect when the pupils observe that the sanitary provision regarded in practice as sufficient is a malodorous privy emptied only at intervals and frequently offensive to rudimentary notions of decency. The intelligent child may well enquire whether in this matter precept might not be usefully reinforced by example. That smells are specially potent in calling up old associations is generally admitted, and it is undesirable that in later life scholastic and stercoraceous memories should be too closely linked, or that the ex-pupil, whose intellectual needs have been so much better served than his hygienic requirements, should murmur, while passing his old school—" *Ille terrarum mihi praefer omnes angulus—redolet !* "

Admittedly, there are cases in which the lack of a sufficient water supply makes proper sanitary provision impracticable meantime. But I do suggest that the replacement of privies by proper water-closets in every school which has, or can be provided with, gravitation water should be considered a matter of urgency.

F. HOUSING.

A report on the estimated housing requirements of the County during the five years 1934-38 in the following terms was submitted to the Public Health Committee, and thereafter approved by the County Council.

22nd December, 1933.

John Robson, Esq., County Buildings, Dumfries.

Dear Sir,

HOUSING (SCOTLAND) ACTS.

Estimate of Housing Requirements during the 5 years 1934-38.

In accordance with the instructions of the Subcommittee on Housing, I have now to report on the above.

The question is to be considered from three points of view—

- (a) The replacement of insanitary houses by new houses ;
- (b) The provision of houses for persons living under overcrowded conditions ; and
- (c) The provision of houses for other persons.

For (a) the powers available are those under the Housing (Scotland) Act, 1930. For rehousing persons displaced from condemned houses there is available (i) a Treasury grant of £2 10s (£2 15s in “ rural ” areas) per unit rehoused over a period of 40 years, and (ii) a contribution from the rates of £4 10s per house over the same period.

For (b) a grant of £3 per house per annum for 40 years, in respect of houses completed before 30th June, 1935, is made available by the Housing (Financial Provisions) (Scotland) Act, 1933.

(c) The provision of houses in this category is to be undertaken by private enterprise. The County Council, however, has adopted the policy that a certain number of houses should be erected for its own employees, and it is proposed, in this connection, to erect meantime 102 houses for roadmen. It is proposed that as those are completed the houses vacated should be either brought up to standard or demolished according to circumstances in each case.

I drew attention, in my memorandum of 14/3/32, to some of the special problems affecting rehousing in agricultural areas. I need not recapitulate them here, but shall deal with the housing needs throughout the landward area.

(1) INSANITARY HOUSES.

(a) Dumfries District.

I estimate that there are about 120 houses which are definitely below modern sanitary standards, and which are not worth repairing. Unfortunately, however, the majority of those are situated in areas very poorly supplied with water, and it is not possible, on that account, to replace them by houses with proper sanitary facilities. Collin, for example, contains a number of poor class houses. The water supply to this village is from the Rockhall Estate Supply, and has long been recognised as inadequate to the demands made on it.

A number of very poor class houses exist in the area between Dumfries Burgh and the Craigs Moss. Their water supply is derived from shallow wells of doubtful quality, and generally situated at an inconvenient distance.

Georgetown is situated in the Netherwood, Kelton and Craigs Special Water District. This district is supplied from the Rockhall system, which, as noted, is insufficient.

Hollywood village and vicinity is supplied from shallow wells, and all efforts to provide a better supply have so far been ineffective.

Kirkton village presents a special problem. I estimate that about half the houses are not worth repairing, and many others are doubtful. The village is subject to periodic flooding. The most satisfactory method of dealing with it would seem to be a Clearance Order under Part I. of the Housing (Scotland) Act, 1930, and the provision of new houses on a more suitable site. But no sufficient water supply is available to make such a proposal practicable in the meantime.

The same difficulty in respect of insufficient water supply affects rehousing in the Hightac and Heck area and in Amisfield.

In Caerlaverock, water supplies, though of an unsatisfactory sort, are available in Glencaple and Blackshaw.

Many of the cottages in the latter area are of a very poor type, and rehousing is urgently required.

(b) *Thornhill District.*

Including those already condemned in Closeburn, I estimate that about 70 houses will have to be dealt with. Both Closeburn and Dunseore have a number of poor class houses, but the lack of adequate water supply in both parishes, especially in the latter, is well known.

Some fifteen houses in Thornhill village and about the same number in Moniaive should be replaced.

The smaller villages—Penpont, Keir Mill, Tynron, and Durisdeer—present special problems. Only the first of those has a public water supply and drainage system. It has a number of houses that fall short of sanitary requirements, but, as in the case of many of the older and smaller villages, it is a matter for discussion whether sufficient employment is available in the neighbourhood to attract tenants prepared to pay the enhanced rents which an extensive rehousing scheme in those villages would entail, and if not, where new houses should be provided.

(c) *Sanquhar District.*

Here the question of rehousing and of employment are intimately connected. The number of persons requiring houses depends on industrial causes over which the local authority has no control. Wanlockhead is a case in point. Many of the houses are definitely below sanitary standards, and a rehousing scheme seems urgently called for. But the lead mines are only now reopening after a long period of idleness, and the future of the industry is still uncertain. It seems unwise to take steps until there is evidence that the revival of employment in Wanlockhead is permanent, as, apart from the lead mines, there is no other industry in the district. I have, therefore, excluded Wanlockhead meantime from my estimate.

Crawick village has some 65 houses, many of a poor type. The inhabitants number about 250. The majority, I understand, are employed at Gateside pit, and I suggest

that rehousing should be on a site nearer that mine, especially as bringing the Crawiek houses up to modern sanitary standards would be a costly and probably unsatisfactory business. For example, a proper sewage system with sewage disposal works would be necessary, and this would be a heavy burden on so small a community.

So far as Kirkeconnel is concerned, the problem is one of overcrowding rather than insanitary houses, and will be referred to later.

Leaving Wanlockhead out of consideration, but including "The Huts" at Kirkeconnel, on which demolition orders have already been made, I estimate that about 75 houses will have to be dealt with under the 1930 Act.

(d) Annan District.

There has been a considerable number of new houses provided in this district during recent years by conversion of hostels, etc., at Eastriggs, and erection of small-holders' houses. Annan Landward has a fair number of poor class houses, not concentrated at any special place, with the exception of the village of Brydekirk. Cummertrees has a number of cottages which have hardly reached the stage at which they should be dealt with under the 1930 Act, but which might be subjects for the Housing (Rural Workers) Acts.

I estimate that 30 houses should be provided for.

(e) Gretna District.

There is a special complication here in that the bungalows at Gretna are to be demolished when the Rent Restriction Act ceases to operate. It is doubtful whether there is sufficient employment available in the vicinity of Gretna Township to justify rehousing there when that time arrives.

Newton, Hollee, and Springfield are places to which attention might first be directed. All are on the Lower Annandale Special Water District system, but none have facilities for sewage disposal. I estimate that 15 houses are required meantime.

(f) *Lockerbie District.*

The worst group of houses—those at Ecclefechan—have already been reported, and 20 houses, it is estimated, are required to replace those. Another 20, at least, will be required in other parts of the district.

There are several large estates in this district, and the extent to which new houses have to be provided will depend on the degree to which the Housing (Rural Workers) Acts are utilised.

(g) *Moffat District.*

The programme for this district will depend largely on developments at Beattock. The Public Health Committee have discussed a proposal to erect some thirty or thirty-five houses at Beattock, but this is contingent on water and drainage facilities being available. Neither exist at present, and all attempts to provide them have proved impracticable on financial grounds.

Apart from Beattock, I estimate that about 10 houses are required to replace insanitary dwellings in this district.

(h) *Langholm District.*

The chief problem here is Rowanburn. This was formerly a mining village, but the pit has been closed for years, and I understand that there is no possibility of its ever being reopened. Apart from the former mining industry there does not appear to have been any reason for a village of the size of Rowanburn, and it would be difficult to find justification for rehousing at that site.

There are about 200 inhabitants occupying 64 houses. Forty of the houses are owner-occupied. The average rental is £5 8s 4d per annum.

There is a public water supply and a sewage system, though the latter is of a primitive sort much below modern standards.

The houses practically all fall short of modern ideas regarding accommodation and sanitary facilities. As they are erected in rows, with little space about them, any extensive renovation under the Housing (Rural Workers) Acts would present serious difficulties. I

suggest that the committee should consider what policy they propose to adopt regarding Rowanburn, and have meantime excluded it from my estimate for the district. Apart from Rowanburn, about 10 houses will be required.

(2) OVERCROWDING.

The only area in which overcrowding constitutes a serious problem is Sanquhar district, in which 19·6 per cent. of the houses have from 2 to 3 persons per room, and 9·3 per cent. over 3 persons per room. Next comes Dumfries district, where the figures are 7·6 per cent. and 2·8 per cent. respectively.

A comparison between Sanquhar Landward and Kirkconnel shows that overcrowding is much more prevalent in the latter.

	Total Houses.	2-3 per room.	Over 3 per room.
Sanquhar Landward	393	39 = 9·9%	16 = 4%
Kirkconnel	765	188 = 24·5%	92 = 12%
<hr/>			
Total District	1158	227 = 19·6%	108 = 9·3%

The degree of overcrowding in Kirkconnel is largely due to sub-letting and to the number of two-roomed houses.

The distribution of the overcrowded population in the various villages is as follows :—

Persons living under overcrowded conditions.

	2-3 per room.	Over 3 per room.
Kirkconnel and Kellobank	830	598
Kelloholm	318	75
Crawick	6	16
Wanlockhead	91	40
<hr/>		<hr/>
Total	1245	729

I suggest that attention should be concentrated, in the first instance, on Sanquhar district, and it would seem judicious to ascertain whether any house-building pro-

gramme is in contemplation by the directors of the colliery there. The population of Sanquhar district depends, to a very great extent, on the activity of the coal-mining industry, and fluctuations in this may cause considerable changes in the numbers of persons requiring houses. The local authority has no responsibility for such changes, and has no means of foreseeing them.

To relieve overcrowding, so far as the 729 persons living more than 3 per room in Sanquhar district are concerned, would require about 55 three-roomed houses, or 50 three-roomed and 10 two-roomed houses.

Obviously, housing provision should be discussed in light of probable future economic conditions in the district.

(3) SUMMARY.

The proposals for provision of new houses made in the above report may be summarised as follows :—

District.	Population.	To replace insanitary houses.	To relieve overcrowding.	For roadmen.	Total.
Dumfries	11,480	120	.....	27	147
Thornhill	7,172	70	.....	30	100
Sanquhar	5,555	75	55	6	136
Annan	5,001	30	.....	6	36
Gretna	5,640	15	.....	5	20
Lockerbie	4,935	40	.....	16	56
Moffat	1,904	10	.....	8	18
Langholm	2,811	10	.....	4	14
Total		370	55	102	527

This total of 527 is equal to 5 per cent. of the number of private houses in the County Landward. I do not, of course, suggest that even after this new provision is made the whole of the remaining houses in the County will be up to modern sanitary standards. Even this restricted programme, moreover, is dependent on the provision throughout considerable areas of water and drainage services, which are at present non-existent.

Yours faithfully,

JOHN RITCHIE.

There was submitted to the Public Health Committee a representation signed by some twenty persons urging the erection of houses at Beattock. The desirability of increasing the housing accommodation there has long been recognised, but the lack of an adequate water supply and of any system for disposal of sewage has always been an obstacle. Enquiries were made as to the possibility of houses being provided by private enterprise, and a scheme was drawn up, based on the County Council's powers under Section 75 (1) (a) of the Housing (Scotland) Act, 1925. After discussion the persons who had indicated their desire for houses stated that they were not prepared to go further in the matter, and would prefer to become tenants rather than to build for themselves. The scheme was therefore dropped, and the Council decided to erect such houses as should appear necessary under the Housing Act of 1933, subject to a sufficient water supply being available. A representation, recommending that a portion of the village of Ecclefechan should be formed into a Clearance Area in accordance with the procedure laid down in Part I. of the Housing (Scotland) Act, 1930, was laid before the Public Health Committee, who approved the suggestion and directed that the appropriate action should be taken.

NEW HOUSES.—Plans for the erection, by private enterprise, of nine new houses were approved.

One hundred and three plans for alterations and additions to existing houses (including forty-seven under the Housing (Rural Workers) Acts) were approved.

The following plans were also approved :—

Conversion of a hostel into three houses.

Alterations on three houses combined into one.

Conversion of out-buildings into a dwelling-house.

Conversion of two cottages into a hostel.

Erection of a tea-room with attached living-room.

Ten "non-subsidy" houses were completed during the year, the details being :

With 3 rooms or less	...	...	2
With 4 rooms or less	.....	.....	4
With 5 rooms or less	.....	.....	3
With 6 rooms or more	.....	.....	1
<hr/>			
Total	.....	.....	10

Five "subsidy" houses were completed during the year.

Twenty-eight houses at Thornhill housing scheme, and four at Moniaive housing scheme, were completed, and also at the latter place a house for the custodian of the rest house.

Erection of twenty-two houses for roadmen was commenced at various sites throughout the County. (As those are all built to the same plan they are not included amongst the new houses for which plans were approved.)

Two hundred and eighty-eight dwelling-houses were inspected in the County Landward, and sixty-five of those were considered to be unfit for human habitation. Notices in terms of Section 14 (1) of the Housing (Scotland) Act, 1930, were served in respect of 45 houses, and in terms of Section 16 (1) in respect of 24 houses during the year.

Notices in terms of Section 40 (1) of the Housing, Town Planning, etc. (Scotland) Act, 1919, were served in three cases, and under Section 20 (1) of the Housing (Scotland) Act, 1925, in one case. All were still pending at the end of the year.

G. HOUSING (RURAL WORKERS) ACTS.

A total of 48 applications under those Acts was received. This, while slightly better than the number in the previous year, still falls far short of what is desirable.

Of the 48 applications, 1 was refused as unsuitable, and 1 which had been approved was subsequently with-

drawn, leaving 46 in respect of which Certificate A was issued. The localities in which the 46 houses are situated are :—Glencairn 9, Applegarth 5, Hoddum 4, Annan 4, Dumfries 3, Dornock 2, Kirkconnel 2, Penpont 2, Morton 2, Ruthwell 2, Langholm 2, Holywood 2, Canonbie 1, Ewes 1, Kirkmichael 1, Tinwald 1, Tynron 1, Cummertrees 1, Moffat 1.

The total applications since the Acts came into force have been 307, and at the end of the year Certificate B had been issued in respect of 263 of those.

H. TOWN PLANNING.

No discussions on this took place during the year.

I. INFECTIOUS DISEASES.

A total of 436 notifications was received from the County Landward and the Small Burghs. This is 148 less than in the previous year. The smaller total, however, does not indicate any lessened prevalence of infectious disease, but is due to the fact that chicken-pox is no longer on the list of notifiable conditions. The numbers for the other infections correspond fairly closely to those for 1932, though Diphtheria shewed a further decrease during 1933.

The total cases notified and the age-periods in which they occurred were as follows :

	Under 1	1-5	5-15	15-25	25-45	45-65	Over 65	All Ages.
Enteric Fever ...	...	...	3	1	...	3	...	7
Scarlatina ...	...	25	93	15	9	3	...	144
Diphtheria ...	...	4	14	3	7	3	...	31
Erysipelas...	...	...	...	...	8	12	5	25
Puerperal Fever ...	...	...	...	1	4	...	...	5
Ophthalmia Neonatorum ...	11	...	...	...	...	...	...	11
Dysentery...	...	...	...	...	1	...	...	1
Acute Pneumonia	6	8	5	1	4	4	3	31
Influenzal Pneumonia ...	2	6	4	3	18	13	11	57
Pulmonary Tuberculosis ...	...	1	10	17	25	11	2	66
Non-Pulmonary Tuberculosis ...	...	10	25	7	5	5	...	52
Puerperal Pyrexia	...	...	...	2	4	...	...	6
Total ...	19	54	154	50	85	54	21	436

The distribution of cases throughout the County was as follows :—

	Dumfries	Thornhill	Sanguhar.	Annan.	Greta.	Lockerbie.	Moffat.	Langholm.	Total.
Enteric Fever ...	5	...	...	1	...	1	...	...	7
Scarlatina ...	14	18	23	25	34	26	1	3	144
Diphtheria ...	9	1	8	5	1	4	...	3	31
Erysipelas ...	7	...	6	4	...	2	6	...	25
Puerperal Fever ...	...	1	...	...	3	1	...	...	5
Ophthalmia Neonatorum ...	2	...	1	1	5	2	...	...	11
Dysentery ...	1	...	...	...	...	...	...	...	1
Acute Pneumonia ...	10	4	8	3	3	1	...	2	31
Influenzal Pneumonia ...	23	...	12	4	7	8	2	1	57
Pulmonary Tuberculosis ...	15	10	7	12	11	5	2	4	66
Non-Pulmonary Tuberculosis	16	2	21	1	2	7	3	...	52
Puerperal Pyrexia ...	2	1	...	...	...	1	...	2	6
Total ...	104	37	86	56	66	58	14	15	436

Enteric Fever.—A somewhat obscure case occurred in Lockerbie district. The patient was an elderly man whose symptoms were not characteristic, and whose blood gave a suggestive but inconclusive reaction. As he was resident at a dairy farm, it was considered advisable to deal with him as a case of Enteric. He was removed to Lochmaben Hospital and made a good recovery.

The remaining six cases were all Paratyphoid Fever. One occurred in Annan district ; the others were connected with a single household in Torthorwald. Despite lengthy investigation the original source of infection was not discovered. All were removed to hospital, and all made good recoveries. The question of the control of typhoid carriers has not been allowed to drop. It was raised at a meeting of the Scottish Branch of the Incorporated Society of Medical Officers of Health (see *Public Health*, XLVI., No 9, June, 1933), and in consequence a deputation from that Society recently met representatives from the Department of Health for Scotland and discussed the whole question, which is being investigated further.

The statistics of the notified cases of Enterica in the County and Small Burghs during the last five years are as follows :—

	1929.	1930.	1931.	1932.	1933.
Cases	5	70	6	5	7
Deaths	3	1	.....	.....	.....
Morbidity per 1000	0·08	1·2	0·12	0·08	0·12
Mortality per 1000	0·05	0·02	.....	.....	.....
Case-fatality per 1000	43	14	.....	.....	.....

Scarlatina.—The number of cases notified during the year was 144—one more than in 1932.

In view of the high incidence of Scarlatina in many parts of Scotland during the latter part of the year, it was feared that Dumfriesshire might also suffer from an epidemic. That, fortunately, did not occur, although several local prevalences were noted.

The incidence of Scarlatina in the various districts during the year was as follows :—

	Dumfries.	Thornhill.	Sanquhar.	Annan.	Gretna.	Lockerbie.	Moffat.	Langholm.	Total.
January ...	...	...	2	2	...	...	...	...	4
Feb. ...	1	1	3	...	...	...	...	...	5
March...	...	1	1	...	...	1	...	...	3
April ...	2	...	1	3	...	2	...	...	8
May ...	3	1	4	...	...	...	...	...	8
June ...	1	...	...	6	...	1	...	...	9
July ...	...	...	...	1	...	2	...	...	3
August ...	...	2	2	4	...	1	...	2	11
Sept. ...	3	2	4	2	2	...	...	...	13
October ...	...	...	1	1	19	...	1	1	23
Nov. ...	1	5	1	2	9	9	...	...	27
Dec. ...	3	5	4	4	5	10	...	...	31
Total ...	14	17	23	25	35	26	1	3	144

The rise in Thornhill District during the two last months of the year appears to have been consequent on the arrival of a non-recognised case of Scarlatina from another part of Scotland, as the majority of the notifications came from houses in the neighbourhood of that where the patient had stayed. A small and localised outbreak in Annan District in June was traced to a mild case which had not been recognised as Scarlatina till several other children became infected.

Gretna had an outbreak in October, diminishing in intensity during the next two months. The disease was, generally speaking, mild, and it is probable that infection was maintained by missed cases. The same applies to Lockerbie District. Most of the patients notified during November and December were resident in Lockerbie Burgh, and all were in attendance at Lockerbie Academy. One case was found desquamating while attending school, and it is very likely that other similar cases escaped detection.

Of the 144 cases, 74 were males and 70 females.

The statistics of notified cases of Scarlatina in the County and Small Burghs during the last five years are as follows :—

	1929.	1930.	1931.	1932.	1933.
Cases	147	200	260	143	144
Deaths	2	1	1	.....	1
Morbidity per 1000	2.5	3.5	4.4	2.4	2.4
Mortality per 1000	0.04	0.02	0.02	.....	0.018
Case-fatality per 1000	13.6	5	3.8	.....	6.9

Diphtheria.— Only 31 notifications were received from the County and Small Burghs during the year. This is 22 less than the number for 1932, which itself was the smallest number reported for many years.

No cases were notified from Moffat District ; Thornhill and Gretna had only one case apiece. The greatest number occurred in Dumfries District, from which nine notifications were received. Six of those were from Crichton Royal Institution.

Eight cases were notified from Sanquhar District, including a group of five which occurred in Sanquhar Burgh during August. The infection in those cases appears to have been introduced from another county, where a girl, X, ordinarily resident in Sanquhar, was on holiday. During the time she was away she suffered from “sore throat,” and was off work for a week, returning thereafter to her employment at a creamery. One case of Diphtheria developed in the house where she resided, and three others among customers whom she had served with milk. During investigation of those cases the history of X’s illness was elicited, and examination of her throat shewed the presence of diphtheria bacilli. All the patients, including X, were removed to hospital, and no further cases occurred.

The incidence of the disease on the higher age-periods was marked during the year, over 43 per cent. of the cases being above 15 years of age.

The statistics of Diphtheria in the County and Small Burghs during the last five years have been :

	1929.	1930.	1931.	1932.	1933.
Cases	74	47	82	43	31
Deaths .....	.....	5	2	4	2
Morbidity per 1000	1.2	0.8	1.4	0.7	0.6
Mortality per 1000 .....	.....	0.08	0.03	0.07	0.03
Case-fatality per 1000 .....	.....	106	24	93	64

Puerperal Fever and Puerperal Pyrexia.—Five cases of Puerperal Fever and six of Puerperal Pyrexia were notified. Two of the former were removed to hospital. All made good recoveries.

One fatal case of Scarlatina occurred in a Puerperal woman.

Pneumonia.—The number of cases of Influenzal Pneumonia showed an increase over the former year—57 as against 16. Acute Primary Pneumonias, on the other hand, fell from 63 in 1932 to 31.

The other notifiable conditions require no special comment.

As in 1932, one case of Undulant Fever occurred in the County. The patient was a middle-aged woman, and the case appeared to be a mild one. She left the County for a holiday, had a severe relapse, and was still laid up at the end of the year. A note on Undulant Fever was included in last year's report (p. 25). Although the mortality from the disease is low, it is apt to cause prolonged periods of invalidism—a fact exemplified by the case referred to.

Removals to hospital of patients suffering from notifiable infectious diseases during the year were as follows :—

	Lochmaben.	Annan.	Thornhill.	Total.
Enteric Fever	7	.....	.....	7
Scarlatina	55	43	44	142
Diphtheria	15	2	7	24
Pneumonia .....	.....	1	2	3
Puerperal	2	1	.....	3
Erysipelas	4	1	.....	5
	—	—	—	—
Total	83	48	53	184

K. SCHOOL CLOSURE.

It was not found necessary to close any school on account of infective disease during the year.

L. LIST OF HOSPITALS.

M. BRIEF REVIEW OF THE HOSPITAL POSITION IN THE AREA.

There has been no material change in the position since last year, and consideration of the hospital scheme has made no further progress. This is unfortunate, as public health activities have now reached a stage at which co-ordination of effort seems desirable, and there is no doubt that for such co-ordination a careful consideration of the hospital provision available and an enquiry as to its efficient and economic working is an essential preliminary.

The evolution of the health services has been greatly influenced by the public interest taken from time to time in special aspects of the work, and as a result the various statutory schemes for medical treatment have developed independently and on no very logical basis. Some are available for certain diseases, others for all diseases in persons of specified age-groups, or in certain occupations. There is overlapping and there are gaps, and it is time to enquire whether the services should not be reconsidered and reconstituted.

This is the more desirable, because it is now recognised that the line formerly drawn between "curative" and "preventive" medicine was largely an artificial one. Much work which may be regarded as curative in its immediate application is also preventive in that it reduces the likelihood of future invalidism. Health authorities can no longer regard their functions as confined to improvement of the sanitary environment and prevention of epidemic disease—the responsibility for provision of such treatment as may be necessary to limit the continuance or development of non-epidemic disease also rests on them. This principle was recognised when maternity, child welfare, and school treatment schemes were inaugu-

rated, but the development of such schemes has been hampered, at least in rural districts, by lack of sufficient hospital facilities. The provision of such facilities, and the extension of treatment schemes to a much larger number of the public, is the object for which powers to arrange hospital services within their areas have been given to local authorities.

Such services must be considered in relation to local circumstances, which vary greatly throughout the kingdom. So far as the south-west is concerned it forms an area geographically distinct, and not naturally dependent on any of the large cities. It seems very desirable that it should develop its own hospital system in as complete a form as possible, and that such hospital provision as at present exists should be carefully investigated with a view to determining how it can be most efficiently and economically employed. Until this has been done, any suggestion to erect new buildings is to be deprecated.

The general lines along which an hospital scheme might be considered were detailed in my annual report for 1930 (p. 35 *et seq.*).

N. AMBULANCE SERVICE.

A new motor ambulance (Austin 23·5 h.p.) has been provided for Lochmaben Hospital. Otherwise there has been no change in this service.

O. OUT-PATIENTS' DEPARTMENT.

A report on the patients treated at Kirkbank Clinic will be found on page 47.

P. MEDICAL CARE AND NURSING OF THE SICK POOR.

No material change has been made on the arrangements formerly reported.

Q. VENEREAL DISEASES.

Dr Robertson reports :—

During the year 92 new cases attended at the Clinic.
Of these, 27 were Syphilis (21 male, 6 Female) ;

50 were Gonorrhœa (47 Male, 3 Female) ; and

15 were Non-specific Venereal (9 Male, 6 Female).

Of the cases of Syphilis 2 were congenital.

Fifty-five old cases continued treatment.

Attendances, irrespective of daily attendances for irrigation, totalled 986.

Three hundred and ninety-nine intravenous and intramuscular injections were given during the year at the Clinic.

The age-incidences of new patients were as follows :—

Age.	Syphilis.		Gonorrhœa.		Non-specific Venereal.		Total.
	M.	F.	M.	F.	M.	F.	
Under 1 .....	.....	.....	.....	.....	.....	.....	.....
1 and under 5 .....	.....	.....	.....	.....	.....	.....	.....
5 and under 15	1	.....	.....	.....	1	.....	2
15 and under 25	4	4	24	3	4	5	44
25 and over	16	2	23	.....	4	1	46
	—	—	—	—	—	—	—
Total	21	6	47	3	9	6	92

Seventy-eight Wassermann examinations and 240 examinations for Gonococci were done in connection with the Clinic.

As regards treatment for Syphilis, the Arsenobenzols continue to be the chief line of treatment, given usually by intravenous, but occasionally by intramuscular, injection, along with Bismuth or Mercury intramuscularly, and the latter drug and Iodides by the mouth. Intolerance to the arsenical drugs is unusual, and when it occurs treatment is carried on by means of the other drugs above-

mentioned, which are less rapid in action though more slowly eliminated. As regards Gonorrhœa, there is so far no rapid method of clearing up the condition, and irrigation or swabbing with various antiseptics, along with alkaline mixtures by the mouth, and injection of Gonococcal or mixed Vaccines remain the chief means of treatment. The Non-specific Venereal cases are those where a risk of infection is admitted with results of a localised nature only as distinct from the systemic infection which occurs in Syphilis and Gonorrhœa. The lack of control over persons who are sources of infection, and who either fail to have any treatment, or who treat themselves, is still a serious hindrance to the lessening of the incidence of venereal cases. Patients are told to advise, if possible, the person from whom the disease has been acquired to seek treatment, or at least examination, either at the Clinic or from their own doctor. Very few do so, and consequently continue to spread infection. On the whole patients are regular in attendance. In some cases, when attendance at the official hours might entail loss of employment, other arrangements are made to enable treatment to be continued.

A few cases who required treatment in hospital were sent to the Edinburgh Royal Infirmary under the care of Mr David Lees, whose death in the spring of the present year is so great a loss to the medical profession generally, and to Venereal Diseases services in particular.

It may be of interest to note in connection with hospital treatment that one patient asked quite seriously whether many people suffering from severe venereal disease were sent to the large hospitals to be done away with, and he further stated that he had often heard that this was done. If this belief extends to other diseases, it throws some light on the reluctance of some patients to undergo institutional treatment.

R. TUBERCULOSIS.

The total number of notifications of Tuberculosis from the County and Small Burghs was 118.

The statistics of notification from 1914 onward are given in the following table :—

Year.	Total Notifications.	Pulmonary.	Non-Pulmonary.	Rate per 1000.
1914	..... 131	83.2%	16.8%	2.4
1915	..... 134	66.4%	33.6%	2.5
1916	..... 198	71.7%	28.3%	3.4
1917	..... 171	68.4%	31.6%	2.6
1918	..... 157	74.5%	25.5%	2.4
1919	..... 139	68.3%	31.7%	2.3
1920	..... 127	74.0%	26.0%	2.2
1921	..... 138	70.0%	30.0%	2.3
1922	..... 118	68.6%	31.4%	2.0
1923	..... 134	63.4%	36.6%	2.3
1924	..... 151	58.9%	41.1%	2.5
1925	..... 156	70.0%	30.0%	2.6
1926	..... 140	50.0%	50.0%	2.3
1927	..... 138	60.1%	39.9%	2.3
1928	..... 146	66.4%	33.6%	2.4
1929	..... 148	54.7%	45.3%	2.5
1930	..... 134	56.0%	44.0%	2.3
1931	..... 121	53.7%	46.3%	2.0
1932	..... 123	53.7%	46.3%	2.1
1933	..... 118	55.9%	44.1%	2.1

The death-rate from Tuberculosis was 0.70 per 1000, slightly below that for the previous year. The Pulmonary and Non-pulmonary rates were 0.42 and 0.28 respectively.

The fall in the death-rate from Tuberculosis since 1891 is shewn in the following table :

		Pulmonary.	Non-Pulmonary.	Total.
1891-1910 (mean)	.....	1.647	0.692	2.339
1911-1920 (mean)	.....	1.028	0.353	1.381
1921	.....	0.839	0.117	0.956
1922	.....	0.859	0.214	1.073
1923	.....	0.910	0.240	1.150
1924	.....	0.699	0.290	0.989
1925	.....	0.921	0.301	1.222
1926	.....	0.693	0.270	0.963
1927	.....	0.722	0.387	1.109
1928	.....	0.828	0.236	1.064
1929	.....	0.510	0.209	0.719
1930	.....	0.543	0.156	0.699
1931	.....	0.45	0.34	0.79
1932	.....	0.62	0.12	0.74
1933	.....	0.42	0.28	0.70

Dr Robertson reports as follows :—

During the year ending 31st December, 1933, 118 notifications were made to this department.

Of these, 66 (32 Male, 34 Female) were Pulmonary, and 52 (32 Male, 20 Female) were Non-pulmonary.

The Non-pulmonary cases were :—

Superficial Glands	.....	34
Abdomen	.....	8
Bones and Joints	.....	5
Spine	.....	1
Other Parts and Organs	.....	4
		—
Total	.....	52

The incidence in the various County Districts was as follows :

District.	Pulmonary.		Non-pulmonary.		Total.
	M.	F.	M.	F.	
Dumfries	7	8	8	2	25
Thornhill	5	5	5	2	17
Sanquhar	4	3	10	11	28
Annan	7	4	1	1	13
Gretna	3	9	5	1	18
Lockerbie	4	1	3	3	11
Moffat	1	1	.....	.....	2
Langholm	1	3	.....	.....	4
	—	—	—	—	—
Total	32	34	32	20	118

The Quarterly incidence was as follows :—

	Pulmonary.	Non-pulmonary.	Total.
First Quarter	25	13	38
Second Quarter	16	17	33
Third Quarter	15	13	28
Fourth Quarter	10	9	19
	—	—	—
Total	66	52	118

The age periods were :—

Pulmonary.		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 35	35 and under 45	45 and under 65	65 and over	Total
Males	3	7	14	.....	7	1	32
Females	1	7	10	8	3	4	34
Non-pulmonary.										
Males	5	15	5	4	.....	3	32
Females	5	10	2	1	.....	2	20
		—	—	—	—	—	—	—	—	—
Total	11	35	24	27	3	16	118

Occupational Incidence of Notified Persons.

School Children	.....	38
Domestic Duties	.....	27
Children Under School Age	.....	10
Farm Workers	.....	9
Miners	.....	4
Labourers	.....	2
Cattleman	.....	2
Reporter, Compositor, Fisherman, Roadman, Bus Conductor, Motor Engineer, Railway Clerk, Mill- worker, Draper, Painter, Baker, Fox Farmer. Poultry Farmer, Physical Instructor, Gardener (each)	.....	1
No Occupation	.....	11

Disposal of Cases.

Admitted to Lochmaben Sanatorium	.....	41
Admitted to Hospital	.....	10
Inmates of Crichton Royal Institution	.....	6

Twenty-two patients occupied shelters, and 69 were in receipt of medical comforts during the year.

S. MATERNITY AND CHILD WELFARE AND
SCHOOL HEALTH SCHEMES.

(a) Maternity and Child Welfare.

(1) MIDWIVES (SCOTLAND) ACT, 1915, AND MIDWIVES AND
MATERNITY HOMES (SCOTLAND) ACT, 1927.

Notice of intention to practice within the County and Small Burghs was given, as required by Section 18 of the principal Act, by thirteen midwives.

The following is extracted from the return for 1933 made to the Department of Health for Scotland :

	Total in Area.	In Midwives' Practice.
Births	913	76
Deaths within 10 days of birth ..	18	1
Cases of Ophthalmia Neonatorum ..	11	3
Cases of Puerperal Sepsis	5	.....
Deaths from Puerperal Sepsis .....	.....	.....
Cases of Puerperal Pyrexia	6	.....
Deaths from Puerperal Pyrexia ...	.	.....
Still-births	30	.....

Medical aid was summoned by midwives in 14 cases under Section 22 of the Midwives (Scotland) Act, 1915.

The classes of emergency were :—

Uterine Inertia and Fits	1	Perineal Tear & Collapse	1
Difficult Presentations	3	Hæmorrhage	2
Perineal Tear	3	Prolonged Labour	4

No matter calling for special attention arose during the year.

Twenty-five visits to District Nurses and 11 domiciliary visits to Midwives were made by the Health Visitors.

Maternity Homes.—There are no registered Maternity Homes in the County. Moffat Cottage Hospital, which has a maternity block, is exempted from registration under Section 15 (1) (a) of the 1927 Act.

(2) NOTIFICATION OF BIRTHS ACTS, 1907-1915.

The total number of births notified in the County and Small Burghs was 913. This includes 30 still-births, which are notifiable, though not registrable.

In addition, 89 transfers regarding infants under 1 year, and 56 transfers regarding children aged 1 to 5 years, were received from other authorities.

Visitation and Supervision.—The total number of domiciliary visits paid by Health Visitors and District Nurses under the Maternity and Child Welfare Scheme

was 27,473. The table below shews the distribution of the work.

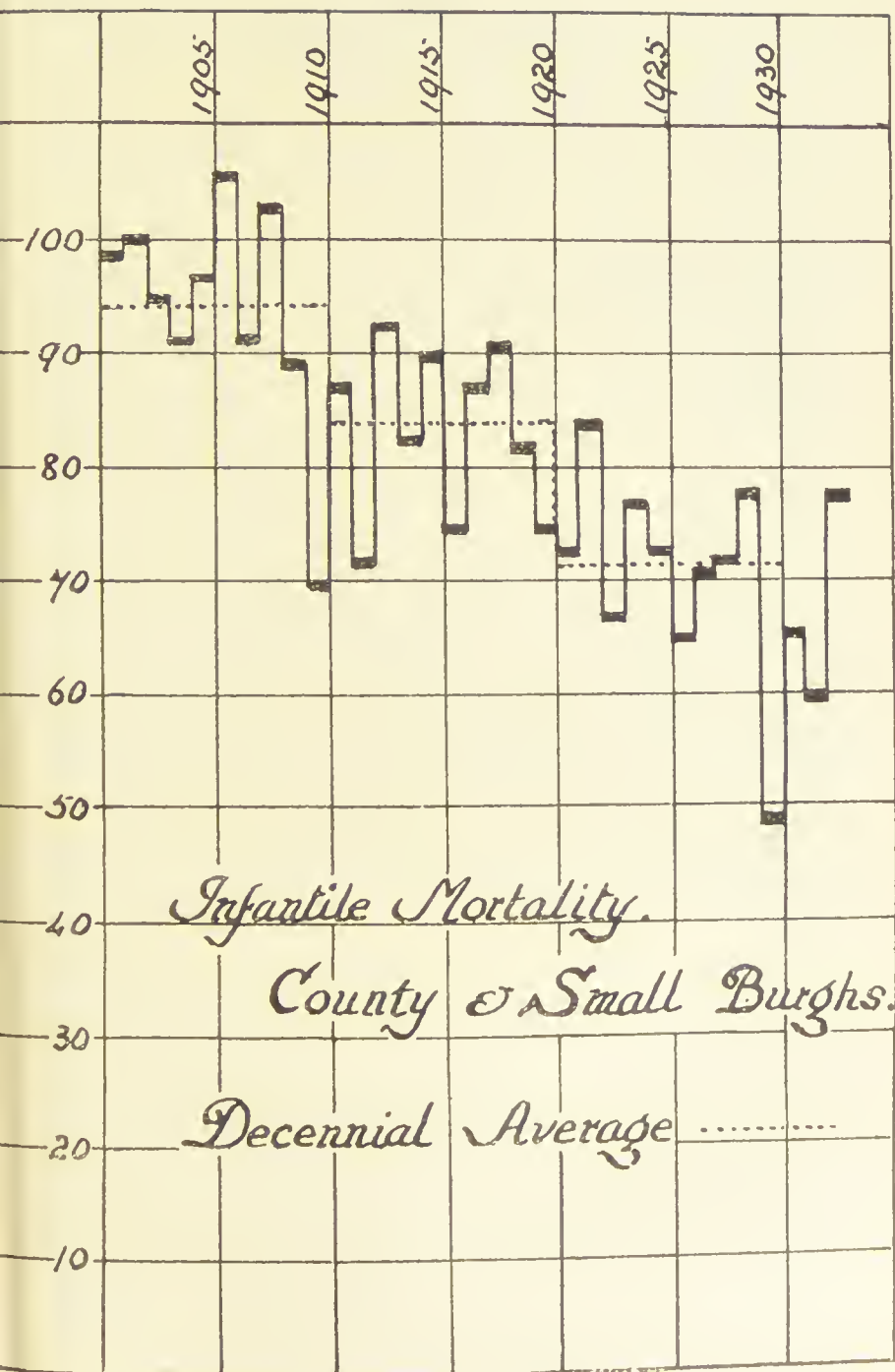
Maternal Mortality.—No deaths from puerperal sepsis were registered during the year. There were four deaths from other causes connected with pregnancy or parturition. This is equivalent to a maternal mortality of 4·3 per 1000 births—an increase on the abnormally low rate of the previous year, but still well below that for all Scotland, which was 5·9 per 1000 births.

In addition, one death from lobar pneumonia occurred in which the patient had been confined during the previous four weeks.

STATUTORY DUTIES OF NURSES AND HEALTH VISITORS Visits during 1933.

Quarter	Tuberculosis.	Maternity.				Infants (Under one year).	Children (1·5 years).	School Children.	Total
		Ante-Natal.		Post-Natal.					
		First Visits.	Re-visits.	First Visits.	Re-visits.				
1	403	78	223	85	1,220	2,648	2,712	1,440	8,800
2	511	81	163	85	1,354	2,779	2,569	883	8,420
3	478	103	229	79	1,153	2,890	2,439	559	7,930
4	438	119	274	86	1,010	2,589	2,505	1,533	8,550
Totals	1,830	381	889	335	4,737	10,906	10,225	4,415	33,718

Infantile Mortality.—The infantile mortality-rate during 1933 was 78 per 1000 births—a considerable increase on that of the previous year, which was the second lowest since 1900, but still below that for all Scotland in 1933—81 per 1000 births. As I have frequently pointed out, wide variations between one year and another are inevitable when dealing with statistics of so small a population as that of Dumfriesshire. The chart on page 55 demonstrates this.



T. MILK & DAIRIES (SCOTLAND) ACT, 1914, AND ASSOCIATED ORDERS.

Mr Sangster reports as follows :—

MATTERS OF OUTSTANDING GENERAL INTEREST AND IMPORTANCE.

The introduction of the Marketing Scheme of the Scottish Milk Marketing Board has caused many, and what may well be far-reaching, changes in milk production in this County. Many of the large producers had good long-time contracts with firms which demanded the maintenance of a reasonable standard in the milk supplied, and in an endeavour to retain such contracts the producers spared no effort to meet the wishes of the purchasers. The removal of such stimulation may tend to have an adverse effect on the standard of the milk produced, and one feels that some form of premium payment is indicated. Should such prove to be impossible, the desirability of stopping supplies from unsatisfactory sources might receive attention, but the most obvious way out of the difficulty would be to increase supervision of the sources of supply. This is possible only when an adequate staff is available.

The subject of the eradication of Tuberculosis from Dairy Herds has received much consideration in recent years, and one of the strong arguments used by those opposing it has been that it would cause disorganisation of the liquid milk industry through shortage of supply. The working of the Scottish Milk Marketing Board has shown that the amount of milk at present produced is far in excess of the requirements of the liquid milk industry and that a large amount has to be disposed of at an uneconomical figure. It would appear then that a reduction in the amount of milk produced would not cause any hardship, but rather the reverse—and the time seems opportune for the question to be tackled. Although the question is a national one, this County would appear to be a favourable starting-point.

No administrative difficulties have been encountered.

INSPECTION OF DAIRY HERDS.

The requirements of the Act were fulfilled in respect of the annual examination of cattle and inspection of premises, methods, etc., on registered premises, and in addition a large number were visited twice and others more often, as occasion demanded. Owing to the increased time necessary for meat inspection, with the consequent disturbance of regular routine, it was thought advisable at certain times to notify farmers of intended visits, so that the animals would be readily available for inspection. This arrangement proved to be quite successful by facilitating the working of the Act without in any way interfering with its efficacy.

On Unregistered and Class iii. premises, *i.e.*, where milk is sold in small quantities or butter is made, the cows were examined as opportunity offered—such as on visits to the districts on other business. I feel that an increased amount of work on these premises would be highly desirable, as they form a very important source of supply of fresh stock to dairy herds both in this County and elsewhere. Careful supervision would doubtless raise the standard of health in such herds and ultimately prove highly beneficial to the dairy industry in general—also it would offer a measure of protection to the families supplied therefrom.

PREMISES.

As explained in previous reports, the premises in this County are classified according to the requirements of Local Byc-Laws. As the result of carefully superintended improvements, 35 dairy farms were raised from Class II. to Class I. of this scale of grading. In view of the very difficult period through which milk producers have passed, this is extremely gratifying, and prompts the hope that with the coming of improved conditions a still greater advance will be possible.

On many other premises minor improvements have been carried out, and one is pleased to record that steam sterilising plants continue to be introduced and that

practically all registered dairy premises now have an independent dairy scullery with hot water supply.

At no time has milk been produced under better conditions of housing and management, a position satisfactory from the point of view of both producer and consumer.

In Table I. will be found the number of premises in the different classes and the number of cows. It will be seen that in the course of the year the total number of registered premises has increased from 1027 to 1056, with a consequent increase of 415 cows.

Table No. 2 gives the total number of routine visits of inspection and the number of visits necessary in advising on reconstruction and improvements of premises.

GENERAL HUSBANDRY.

The continued improvement in registered premises has resulted in an appreciable raising of the general standard of cleanliness of the cows and of the utensils. Unfortunately in certain districts a failure of the water supply added greatly to the difficulty of maintaining a high standard of cleanliness, and it would doubtless be an advantage if an adequate water supply was made available in such districts.

The position in unregistered premises is not so satisfactory.

The seasons were good, and therefore crops were secured in excellent condition. Increased attention is being given to the providing of a balanced diet, resulting in improved health of the animals and a high quality of milk. A large number of producers are members of Milk Recording Societies, and the reports received from these are highly satisfactory. These societies have done much useful work in encouraging the raising of the general standard of quality of the milk produced by their members.

DISEASES OF COWS OTHER THAN TUBERCULOSIS.

Table III. gives particulars of the diseases met with during the year.

When it was considered essential, affected cows were isolated, the milk was either mixed with disinfectant and disposed of or boiled and fed to calves and pigs. A very bad case of cow pox occurred on one farm, the majority of the herd being involved. The position with regard to Acetonæmia or Post Parturient Dyspepsia has become more favourable with the improved husbandry. Contagious abortion continues a scourge, although it is difficult to ascertain the full extent of the infection. Contrary to the findings in certain other districts, the disease seems to be most serious in herds maintained by flying stocks. I am glad to report that in this County the percentage of self-supporting herds continues to increase; and I am hopeful that the position with regard to contagious abortion will tend to improve. During 1934 an attempt will be made to investigate the extent of the infection in herds in this County.

TUBERCULOSIS IN DAIRY COWS.

Table V. is an extract from the Returns for 1933 under the Tuberculosis Order of 1925 relating to animals on registered premises, and shows very clearly the position with regard to the disease in this County. Although the increase in the number of cows dealt with might, at first glance, be regarded as discouraging, I am convinced that the reverse is the case. The large number of unconfirmed cases reported shows that the stockowner is becoming increasingly observant and more appreciative of his duty towards the community. The high percentage of not advanced cases found at post-mortem is also gratifying, pointing, as it does, to the detection of animals in the earlier stages of the disease before they have become highly dangerous. That some definite advance has been made in recent years is conclusively proved by the absence of reports of Tuberculosis positive samples from authorities to which milk from this County is forwarded. During 1933 only two such reports were received, and in one of these the source of infection was outside the County. The milk involved came from a local creamery receiving supplies

from 23 herds in this County and 3 in a neighbouring county—clinical examination of the herds in this County failed to show any suspicious animal, and samples from all the farms proved negative to the biological test. A mixed sample from the extraneous supply proved positive to the biological test.

The second case concerned two farms belonging to the same owner, involving 92 cows maintained on the flying herd principle. Six (6) animals were dealt with under the Tuberculosis Order of 1925, after which bulk samples proved negative to the biological test. Had more frequent routine clinical examinations of these herds been possible, I am satisfied that the necessity for a Tuberculosis positive report from the receiving authority would not have arisen.

POSITIVE CASES FOUND ON ROUTINE CLINICAL EXAMINATION OF THE HERDS.

One hundred and four cases, representing 52.5 per cent. of the total number of animals slaughtered, were detected during the routine clinical examination of the herds.

No Tuberculin Test was carried out under Section 22 of the Act. When considered necessary it was done under the Tuberculosis Order of 1925.

STEPS TAKEN TO SECURE A TUBERCLE FREE MILK SUPPLY.

During visits to dairy farms every opportunity is taken of discussing the benefits accruing from the cleaning up of the herds. Particular emphasis is laid on the necessity of rearing the calves on the milk of healthy cows and of keeping young stock away from the sources of infection. This is made possible on many farms by the outwintering of the heifers. The advantage of early reporting of any animal showing suspicious symptoms is stressed.

Table IV. gives a note of the number of samples of milk and sputa submitted for examination. At regular intervals samples were taken at the local creameries for biological test, and it is intended to give greater attention

to this, although any marked increase will be difficult owing to the limited facilities available in the laboratory.

LICENCES IN RESPECT OF TUBERCLE FREE HERDS.

Table VI. gives the particulars required under this heading. It will be noted that one additional licence for the production of Grade "A" (T.T.) milk was granted.

NON-LICENSED HERDS KNOWN TO BE FREE.

As the existing licence-holders are unable to dispose of the whole of their supplies as graded milk, it is impossible to advocate any expansion, but quite a number of producers have cleaned up their herds in the hope that matters will improve. For the present they are content to rely on improved trade for their young stock and less wastage in the herd in general to repay them for the trouble and expense entailed.

It is interesting to note that several herds, including one of 69 head, when tested for the first time did not have a reactor.

Could a reasonable price be guaranteed for milk from tubercle free herds, no difficulty would be experienced in immediately adding to the total given.

CONDITIONS MILITATING AGAINST SUCCESSFUL MARKETING OF CERTIFIED AND GRADE "A" (T.T.) MILK.

In the report of 1932 it was pointed out that the supply of tubercle free milk exceeded the demand, and that large quantities had to be sold as ordinary milk or even manufactured into cheese. The excessive price charged for the product in many towns was doubtless to blame to a certain extent, but one feels that the public in general remain apathetic. This is extremely disappointing in view of the tremendous amount of labour and thought devoted to the subject. The year 1933 brought no improvement, although high hopes were entertained that the Milk Marketing Board would be able to do something about it. Unfortunately these hopes were not fulfilled, and the position in many cases is less satisfactory than

formerly, and again the question of selling price demands attention. Is it reasonable to expect that, given time and improved organisation, the Board will be able to put matters on a more satisfactory basis ?

NOTES ON SAMPLES TAKEN FOR EXAMINATION IN TERMS OF SECTION 21 OF THE ACT.

See Table No. IV.

COMPLIANCE WITH SECTIONS 13 AND 14 OF THE ACT.

No action has been necessary under these sections.

U. PUBLIC HEALTH (MEAT) REGULATIONS (SCOTLAND), 1932.

SLAUGHTER-HOUSES.

County—Thornhill	...	...	One public slaughter-house.
Do.	...	...	One private slaughter-house for pigs at Bacon Factory.
Kirkconnel	...	...	One private slaughter-house.
Racks ...	...	...	One private slaughter-house.
Templand	...	...	One private slaughter-house.
Kirkpatrick-Fleming	...	...	One private slaughter-house.
Dornock	...	...	One private slaughter-house.
Burghs—Sanquhar	...	...	One public slaughter-house.
Lochmaben	...	...	One private slaughter-house.
Lockerbie	...	...	One public slaughter-house.

Six hundred and fifty-nine visits were paid to slaughter-houses during the year. 21 visits were made to farms for emergency slaughters. When at all possible animals intended to be slaughtered for emergency reasons are taken to slaughter-houses.

I am of opinion that all cases of emergency slaughter in cattle are now being reported.

During the last three months of the year it was found necessary to obtain the help of the Thornhill Slaughter-house Superintendent to act as Detention Officer at Thornhill Bacon Factory. During the three months 4010 pigs were examined and 15 per cent. of these detained for further examination by the County Veterinary Inspector.

In the Burghs of Annan, Langholm, and Moffat meat inspection is not carried out by the County Veterinary staff.

Table VII. gives the results of the meat inspection carried out.

Table I.

REGISTERED PREMISES, CLASSIFICATION AND NUMBER OF COWS.

District.	Premises.				Total.	Cows.
	Class 1	Class 2	Class 3	Class 4		
County ...	220	332	452	36	1040	17,574
Burghs ...	1	6	...	...	7	92
County (Retail) ...	...	...	...	...	1	...
Burghs (Retail) ...	...	...	...	...	8	...
Total ...	221	338	452	36	1056	17,666

Table II.

INSPECTION OF HERDS AND PREMISES.

Routine Visits of Inspection	...	...	...	...	...	1118
Plans, Reconstruction, and Improvement of Premises	...	...	...	...	...	73
Total	...	...	...	...	...	1191

Table III.

DISEASES FOUND ON CLINICAL EXAMINATION.

Tuberculosis	...	...	...	...	...	...	See Table V.
Mastitis	...	...	...	...	...	...	443
Indurated Udders, not Tuberculous	...	...	...	...	...	...	152
Teat Eruptions	...	...	...	...	...	...	101
Atrophy (Complete or Partial)	...	...	...	...	...	...	246
Metritis or Retained Placenta	...	...	...	...	...	...	38
Other Diseases	...	...	...	...	...	...	46

Table IV.

LABORATORY EXAMINATIONS.

(i) Bacteriological.

Tuberculosis.				Pathogenic Organisms, excluding Tubercle Bacilli.		General Exam.	Sputa.		Total.
Micros- copical.		Biological.							
Pos.	Neg.	Pos.	Neg.	Pos.	Neg.		Pos.	Neg.	
7	206	3	98	38	83	259	45	212	951

(ii) Chemical.

Butter Fat and Solids	63
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Table V.

EXTRACT FROM RETURNS UNDER TUBERCULOSIS ORDER OF 1925.

REPORTS MADE ON ANIMALS ON REGISTERED PREMISES.

	Premises Producing Milk, etc.	Premises Producing Butter, etc.	Total.
Reports received and examined ...	667	32	699
Cases confirmed and slaughtered ...	181	17	198
Cases found at "Post-Mortem" to be :—			
(a) Advanced T.B. ...	69	6	75
(b) Not Advanced T.B. ...	112	11	123
Cases confirmed and reported by :— County Veterinary Inspectors	102	2	104

Table VI.

(a) NUMBERS OF LICENCES, VISITS, SAMPLES, AND TESTS.

Producers. Class of Licence.						Milk Samples Examined.			Tuberculin Tests.				
Certified	Grade "A." (T.T.)	Grade "A."	Pasteurised.	Retailers	Visits.	Bact.	Chem.	Total	Herds, One Test.	Herds, Two Tests.	Routine Tests.	Interim Tests.	Total.
1	14	1	1	5	287	99	63	162	6	8	1516	62	1578

(i) Certified.

(b) TUBERCLE FREE HERDS.

Name and Address of Dairy.	Average Herd.	Estimated Gallons per Annum.
Wm. A. Thomson, Dalpeddar, Sanquhar	28	
Total	28	23,800

(ii) Grade "A" (T.T.).

A. & A. Kirkpatrick, Barr, Sanquhar ...	96	
J. Howie & Sons, Muirside, Holywood ...	50	
W. Brown, Drumeork, Thornhill ...	53	
R. Dickie, Knockenjig, Sanquhar ...	52	
D. Kirkpatrick, Auchenbainzie, Penpont	61	
J. S. Laidlaw, Glengar, Penpont ...	29	
R. Millar, Shawsholm, Closeburn ...	73	
The Directors, C.R.I., Dumfries ...	110	
J. Cochrane, Byreholm, Keir (Reg. Dec., 1933)	(47)	
D. & G. D. Wyllie, Hannah, Cummertrees	57	
Messrs Halliday, Gillesbierigg, Boreland	44	
J. Jamieson, Roundbush, Dornock ...	35	
M. Sloan, Hunterhouse, Lochmaben ...	30	
R. Graham, Blackford, Lockerbie ...	29	
Total	719	441,639

(iii) Grade "A."

A. H. L. Walker, Rogermoor, Moffat ...	27	
Total	27	16,605

(iv) Herds known to have passed the Tuberculin Tests, not Licensed under this Order.

11 (Eleven) Herds... ..	483	
Total	483	297,045
Grand Total	1257	779,089

(v) Premises Licensed for Bottling and Retailing Grade "A" (T.T.).

J. Doyle, Temperance Hotel, Penpont.
 Co-operative Society, Sanquhar and Kirkconnel.
 T. J. B. Sime, High Street, Annan.
 Wm. Thomson, 105 Central Avenue, Gretna.
 Messrs Edgar, 78 High Street, Langholm.

Table VII.
 MEAT INSPECTION BY COUNTY VETERINARY INSPECTORS.
 Synopsis showing Meat and Offal condemned.

Bovines except Calves.										Sheep.					Calves.				Pigs.						
Carcasses.	Quarters.	Meat—Lbs.	Heads.	Lungs.	Liver.	Other Offal.	Weight. Lbs.		Carcasses.	Quarters.	Mutton—Lbs.	Liver.	Other Offal.	Carcase.	Offal.	Weight. Lbs.		Carcasses.	Pork—Lbs.	Heads.	Liver.	Other Offal.	Carcase.	Offal.	
							Carcase.	Offal.								Carcase.	Offal.								
58	48	1 107	1 45	252	678	812	310	382	1	6	513	193	829	1761	35	296	1982	484	3	483	154	351	344	940	4348

OTHER SANITARY WORK.

DISPOSAL OF REFUSE.

A site regarded as suitable by the Public Health Committee was selected for forming a new dump for the village of Ecclefechan. In view of the attitude of the owners of the land the Committee decided to use its statutory powers of compulsory purchase, should that prove necessary.

Steps were taken to procure a new site for the Kirkconnel dump. A suitable place was selected, and it is hoped that it will soon be in use. The existing dump is now overfull, and though not yet in such bad condition as that at Ecclefechan, is in a state which gives rise to legitimate complaints.

The difficulty of arranging for proper scavenging in small villages and hamlets is a very real one. The recognised method of dealing with it is the formation of a special scavenging district with, of course, the imposition of a rate, which, in many instances, represents a considerable burden. It seems likely enough that a satisfactory solution would be found if the inhabitants of areas where special districts have not been formed would arrange among themselves to co-operate in getting rid of the rubbish from their houses. A single dump, kept tidy and earthed over when necessary, would be a great improvement on the usual arrangement—a number of untidy rubbish heaps round the outskirts of the village. Little, if any, extra labour would be entailed, as many cottagers already carry their household rubbish a considerable distance before dumping it. The same amount of labour, exerted in co-operation with their neighbours, would enable them to dispose of household rubbish in an unobjectionable way, and would make the formation of special districts unnecessary.

One deplorable result of the casual method of getting rid of rubbish usually adopted is the pollution of streams

which it often entails. Almost every burn which is so ill-advised as to flow in close proximity to a village does so at the risk of having its bed fouled with cabbage stalks, tea leaves and cinders, broken china, bottles, tins, and privy contents. What should be the principal amenity of the neighbourhood becomes a foul ditch, offensive to sight and smell alike. It may be argued that such a state of matters, though æsthetically objectionable, has no ill-effect on health, and that it is unnecessary to become unduly moved by it. But it is certain that such public slovenliness tends to lower the standard of individual cleanliness, and to produce a state of matters eminently calculated to promote the spread of disease, should that be introduced. I cannot help feeling that the civic conscience of rural communities should be able to devise a remedy, without the formation of special districts and the imposition of additional rates.

Peter's Loaning.—The condition of matters at Peter's Loaning, Kimmeter Green, referred to in last year's report, remains unchanged. Objections were raised to the Committee's proposal to pipe the ditch which runs along the upper part of Peter's Loaning, and action was delayed meantime.

Port Sanitary Regulations (Scotland) 1933.—In accordance with the terms of those regulations, the Public Health and Public Assistance Committee recommended that mooring stations should be established at Kingholm Quay and at Gleneapple. So far it has not been necessary to make use of them, and it is hoped that the County's present immunity from sea-borne disease may continue.

Report upon Public Assistance Work for Year 1933.

During the year ended 31st December, 1933, the number of persons from whom applications for public assistance were received showed an increase over the previous year of 122, while the number of cases admitted by the Committee to the Roll of Poor was 86 in excess of 1932. Despite this apparent increase in the amount of destitution prevailing in the County, however, the number of persons actually remaining in receipt of assistance as at 31st December, 1933, compared favourably with the number chargeable at the corresponding date in 1932, 42 cases being on the rolls in excess of the previous year, 30 of whom were able-bodied unemployed poor. Though these figures still indicate an increasing degree of need in the County, it is encouraging to note that the increase is very much less than that recorded at the end of 1932, when 114 additional poor persons were chargeable, compared with 1931.

Unfortunately a large number of able-bodied agricultural workers now appear to be unable to find permanent employment in the County, and are dependent upon seasonal work. Consequently a substantial burden falls upon the ratepayers for the support of the dependents of such men during periods of unemployment, and this explains largely the increase referred to in the number of able-bodied poor. It is anticipated that towards the end of 1934 the administration of relief to the bulk of able-bodied poor will be transferred to the Unemployment Assistance Board proposed to be constituted in terms of the Unemployment Insurance Bill.

The following tables contain details of the number and manner of disposal of applications for public assistance during 1933, and of the number of County admitted poor chargeable at the end of the year :

APPLICATIONS FOR RELIEF.
Number of Applications for Public Assistance.

District No.	No. of Applications	Withdrawn by Applicant.	Refused by Committee	Relief offered not accepted.	Granted Relief.			
					Out-door.	In-door.	Institutional Lunacy Cases, etc.	Total Relieved.
1	165	4	13	4	131	12	1	144
2	93	...	10	1	57	21	4	82
3	213	4	22	...	175	11	1	187
4	145	4	8	2	112	13	6	131
5	103	3	3	2	83	8	4	95
6	102	6	5	1	74	13	3	90
7	26	...	...	...	23	1	2	26
8	60	...	8	1	47	...	4	51
...	7	...	3	...	1	2	1	4
Total	914	21	72	11	703	81	26	810
Total for year 1932	792	14	42	12	590	101	33	724

NUMBER OF REGISTERED POOR CHARGEABLE TO COUNTY.

Classification.	At 31st December, 1933.			At 31st December, 1932.		
	Poor Persons	Dependents.	Total	Poor Persons	Dependents.	Total.
Ordinary—Outdoor	409	463	877	401	508	909
Do. Indoor	62	10	*72	57	2	59
Boarded-out						
Children ...	82	...	82	84	...	84
Lunatic and Mental						
Defective ...	170	...	170	169	...	169
Able-bodied						
Unemployed ...	142	342	484	112	326	438
Total ...	865	820	1685	823	836	1659

* In addition to this number, 15 cases belonging to the Corporation of Glasgow were boarded at Rowantree House.

SUSPENSE POOR.

At the end of year 37 cases were chargeable on the roll of suspense poor. In 27 of these the settlement was still undetermined, the remainder being without any available settlement in Scotland.

LUNATIC POOR AND MENTAL DEFECTIVES.

The following are the details of numbers of this class of poor chargeable to the County at 31st December, 1933 :—

	In Institutions.	Boarded-out.	Totals.
Lunatic Poor	139	8	147
Mental Defectives	16	7	23
Totals	155	15	170
Totals as at 31st December, 1933	152	17	169

VAGRANTS.

The number of vagrants dealt with and relieved during 1933 was 11,117. The three previous years' figures were as follows :—12,096 in 1932, 9183 in 1931, and 8634 in 1930.

The Government is now directing its attention to this problem, and it is hoped that some satisfactory and practical solution will be found. The trouble and expense involved in a county such as Dumfries is considerable.

CLAIMS FROM OTHER AUTHORITIES.

Of 146 claims received from Other Authorities, 126 were finally admitted, 18 refused, and 2 were still under consideration at end of year.

CLAIMS AGAINST OTHER AUTHORITIES.

Claim was made against Other Authorities in respect of 78 poor persons becoming chargeable in this County, and of that number 62 were successfully established, 6 claims remaining in dispute at the end of year.

POORHOUSES.

The work at both institutions controlled by the Council, viz., Rowantree House and Notwen House, proceeded satisfactorily during the year. In October, 1933, the Governor of Rowantree House resigned his appointment, and an Interim Governor, who was still in office at end of the year, was appointed pending the Committee's determination of future policy in regard to poorhouse accommodation.

PROSECUTIONS.

During the year the threat of action in terms of Section 80 of the Poor Law (Scotland) Act, 1845, was successfully used in several instances against husbands who were failing to maintain their wives and children. In one case the husband was finally brought before the Sheriff and sentenced to imprisonment for 30 days. In one other case a satisfactory settlement was reached out of court. One man defrauded the Authority of the sum of £17 11s by wilfully neglecting to reveal relevant information as to his household income. As a result of the action which was instructed, and in which sentence was deferred, a substantial portion of the sum involved has been repaid up to date.

REMOVALS TO ENGLAND.

The powers conferred on local authorities by the Poor Removal Act, 1862, have been fully taken advantage of during the year. In five instances where the recipients of relief were clearly settled in England, warrants for their removal were obtained in terms of the Act. In only one case, however, was the removal carried out under warrant ; of the other four, one secured employment and ceased to require assistance, the remaining three parties removing voluntarily to England within the prescribed period after the deliverance of the Sheriff.

REPAYMENT OF ALIMENT.

In terms of Section 71 of the Poor Law (Scotland) Act, 1845, relatives have been pressed to contribute towards the maintenance of members of their family in receipt of poor relief. The sum recovered from this source, including workmen's compensation recoveries, etc., amounts to £1012 18s 5d, representing an increase of £15 16s 5d over the previous year.

CHILDREN AND YOUNG PERSONS ACTS.

The following statement shows the number of cases dealt with in terms of the above Acts. The Local Government Officers, in their capacity of Infant Life Protection Visitors, paid 130 visits of inspection in these cases.

CHILDREN ACT, 1908.

Dist. No.	No. of Cases. 1st Jan., 1933.	Intimations Received.	Deaths.	Removals, etc.	No. of Cases. 31st Dec., 1933.
1	4	4	...	3	5
2	...	7	...	1	6
3	7	6	1	1	11
4	11	10	2	5	14
5	6	5	...	2	9
6	2	3	...	1	4
7	...	1	...	1	...
8	1	...	...	...	1
Totals	31	33	3	14	50
Previ- ous Year	37	25	1	30	31

VACCINATION DEFAULTERS.

The number of defaulters reported by Registrars and Other Authorities was 189, as per the undernoted table, which indicates the manner in which they were disposed of. Orders to Vaccinate were issued to the Medical Officers in 94 cases.

District No.	Successfully Vaccinated.	Certified Insusceptible	Certificates of Postponement.	Certified Not Traced.	Reported to Other Authorities.	Died before Vaccination.	Still Unvaccinated	Total.
1	12	5	...	3	...	...	...	20
2	3	...	...	1	...	...	...	4
3	31	1	8	1	4	...	...	45
4	29	...	6	1	1	1	...	38
5	21	1	3	...	2	...	...	27
6	5	1	1	...	...	...	...	7
7	31	2	3	...	4	2	...	42
8	2	1	...	1	2	...	...	6
	134	11	21	7	13	3	...	189

TRANSITIONAL PAYMENTS.

The Committee considered and disposed of 952 first claims for Transitional Payments, and re-assessments were made in 4998 cases. The method of disposal was as follows :

NEW CLAIMS.

Total Determinations Issued.	Dealt with as follows :—		
	Full Standard Rate.	Reduced Rate.	Nil Assessment.
952	247	544	161

RE-ASSESSMENTS.

Total Determinations Issued.	Dealt with as follows :—		
	Increased Assessment.	Reduced Assessment.	No Change.
4998	777	751	3470

Average Number of Determinations issued per week, 114.

In addition, 3799 investigations and reviews were made, in these cases no determinations by the Committee being required, the circumstances remaining unchanged.

APPLICATIONS FOR RELIEF FROM PAYMENT OF RATES.

As in previous years, investigation of the circumstances of persons applying for relief from payment of county rates was carried out by the Local Government Officers. The number of cases in which reports were obtained and recommendations furnished for the guidance of the appropriate committee was 266.

POOR LAW MEDICAL SERVICE.

No alteration was made in the administration of the Poor Law Medical Service, and the work was carried out in a satisfactory manner. During the year the following changes took place in the personnel of Poor Law Medical Officers :—

Dr R. A. M. Davidson, Moniaive, succeeded Dr John Hunter, resigned, for the Parish of Gleneairn.

Dr Edward Hutcheon, Dumfries, succeeded Dr Livingston (*bit*), for the Parish of Holywood.

Dr James Girdwood, Ecclefechan, succeeded Dr A. Murray Marr, resigned, for the Parish of Hoddum.

SMALL BURGHS.

BURGH OF ANNAN.

Mr Rodger reports :—

“ **Water Supply.**—The water supply delivered to the town is by gravitation, and consists of an upland surface water, carefully filtered before reaching the consumer. The analysis of this water show it as a water free from all impurities, and conforming with all requirements necessary. and is capable of being used for all domestic purposes. During the year, owing to an excessive rainfall over the catchment area, the volume of the water at the inlet caused a breakage of the embankment, and it was found necessary to construct a concrete wall to protect the embankment in the future from such occurrences. Under the Reservoir (Safety Provisions) Act, 1930, the reservoir was inspected by Messrs Kyle & Frew, Civil Engineers, Glasgow, and several details were mentioned in their report, which works the Town Council intend to have carried out within the next two years. Several of the mains throughout the system were examined, and it was found necessary for the betterment of the supply to have same scraped. Altogether 4500 yards of distribution mains were scraped, and as this has been found effective it has been decided to proceed with a similar length next year. During the year the filter beds and clear water tank have been cleaned at periods of three months. This year, owing to the amount of impurities being carried to the filter beds, it was found necessary to have these cleaned to the plates, and so ascertain the delivery of pure water at all times. Throughout the year the pipes have been scoured at regular intervals, and where defective valves, etc., have been found, these have been put in order. I am pleased to state that although the reservoirs during the summer in the surrounding districts were short of water, the Annan Water Reservoir was able to cope with all requirements, and at the same time assist in the supplying of water to an outlying district.

Drainage.—No serious complaints or nuisances have arisen from this branch of the Public Health Department during the year. The sewers have all been flushed periodically during the dry season, and I am pleased to say that floodings or chokages have not occurred, though several heavy rainfalls have been experienced during the year. Owing to the lack of fall in the sewers throughout the town it is necessary to give these careful attention, and it was found necessary to seal several manholes from which offensive smells were being emitted. Where these manholes were sealed, ventilating shafts were erected in such positions clear of all houses, and this has been found very successful in coping with the nuisance.

Scavenging.—The scavenging of the town is carried out by two horses and carts, and carted to a regulation coup situated about a quarter of a mile from the town. The collection for household refuse is carried out daily, and papers or surplus materials from shops are removed every Tuesday. This year the Council, owing to the dilapidated condition of the cleansing cart, decided to purchase a new one, and a low loading cart of modern design was obtained, which aids the work being carried out in a more efficient manner. The number of loads collected during the year was 2157, made up as follows :—

Household Refuse .....	.....	.....	1852
Paper from Shops .....	.....	.....	269
Surplus Material .....	.....	.....	36
			<hr/>
			2157

The cleansing of streets is carried out daily in an efficient manner.

Nuisances.—Throughout the year nuisances have not been prevalent, but where such were intimated immediate steps were taken to remedy same, and where notices were sent to the proprietors those were attended to without delay. There is only one privy midden existing in the Burgh, and no procedure can be taken against this as the public sewer cannot be taken this distance away owing

to the intervention of the railway, which makes it impossible to obtain sufficient fall.

Factories and Workshops.—Periodical visits are made to these premises, and only one intimation for lime-washing had to be recorded during the year.

Housing and Town Planning.—Under the Housing Acts a large number of visitations were made on insanitary houses existing in the Burgh, and a list drawn out. A list of twenty-one houses were served with Closing Orders, and on application of the proprietors undertakings were gone into, when it was decided that as the houses fall vacant they will automatically be closed and ultimately be demolished. A further list is also being proceeded with, and when this is completed 65 houses will have been dealt with in this way. The Town Council, alive to the menace of insufficient sanitary accommodation for the ratepayers, have constructed eight three-apartment houses, and have taken estimates for a further four of similar dimensions. They are also considering proceeding with a further 66 houses to meet with the demands of the people who will be decanted through the issuing of Closing or Demolition Orders. Under the Housing (Rural Workers) Acts, 1926 and 1931, grants have been made on eleven houses which come under the category of these Acts.

Slaughter-house.—The premises are vested in the Local Authority and looked after by them. All killing is accomplished here by local butchers and farmers in the surrounding district. The killing is done by the humane killer. The number of animals slaughtered during the year was as follows:—

Cattle	.....	.....	.....	.....	543
Sheep	.....	.....	.....	.....	2038
Pigs .....	.....	.....	.....	.....	584
Calves	.....	.....	.....	.....	83
Lambs	.....	.....	.....	.....	13
					<hr/>
					3261

During the year a nuisance of rats was experienced in the slaughter-house, and it was only after the application of carbon monoxide into the runs, and stripping part of the roof, that the rodents were exterminated, and I am pleased to say that since this work was carried out no trace of these pests have existed.

Meat Inspection.—During the year the following animals and parts were seized and destroyed under the warrant of a magistrate :—

Cattle	.....	.....	.....	.....	1½
Sheep	.....	.....	.....	...	7
Pigs	.....	.....	.....	.....	4
Calves	.....	.....	.....	.....	1
Cattle Livers	.....	.....	.....	.....	19
Sheep Plucks	.....	.....	.....	...	81

Schools.—There are three schools in the Burgh which are visited periodically. No complaint could be found in the manner in which they are looked after. In the Greenknowe School improvements were carried out to the lavatory accommodation.

Dairies, Cowsheds, and Milkshops.—There is only one milkshop situated in the Burgh, and this is kept in a sanitary condition.

Interments.—No interments have been carried out during the year.

Burial Grounds.—Two burial grounds exist within the Burgh, but both are now out of use. They are kept in a cleanly and sanitary condition during the year.

Bye-laws.—The only bye-laws existing are for the surveillance of the slaughter-house, and these are strictly adhered to."

BURGH OF SANQUHAR.

Water Supply.—Investigations regarding the waste of water referred to in previous reports were continued, and the attention of the Town Council was again drawn to the fact that excessive consumpt entailed excessively rapid, and therefore inefficient, filtration, and that in consequence consumers were not being adequately protected against the risk of water-borne disease.

Mr H. M. Ross, C.E., reported in April on the steps already taken to detect and eliminate waste. He pointed out that when investigations were begun the daily consumpt (for a total population of, roughly, 2000 persons) was at the abnormal figure of 170,000 gallons per day. Forty-eight leaks were located and repaired, the most serious being in the scour valve from the clear water tank. After this had been done, and steps taken to check waste on premises used for trade purposes, etc., the daily consumpt was reduced to 120,000 gallons per day, and the engineer expressed the opinion that careful supervision of the system might lead to a further reduction of 30,000 gallons daily.

The efficacy of the filtration was tested during September, when samples of the unfiltered water and of that passing from each filter were compared. One filter shewed a degree of bacterial purification of approximately 80 per cent., the other a purification of about 66 per cent. Organisms of the *B. Coli* group were present in 1 cubic centimetre in one filtrate and in 0.1 cubic centimetres in the other. This is an unsatisfactory result, and taken along with those formerly obtained supports the view which I have often expressed that the improvement resulting from filtration is negligible, and would be insufficient to protect consumers from water-borne disease, should the raw water become contaminated—a contingency which, in view of the conditions in the gathering ground, cannot be disregarded.

Sewage Works.—Pressure of other work in the laboratory, consequent on the abnormally dry summer, made it impossible to carry out routine investigations of the various rivers and of sewage effluents discharging into them, except in special cases. There was no reason to suppose, however, that the degree of purification attained by those works during 1933 was anything but satisfactory, and, in fact, analyses of the effluent early in 1934 shewed that the works were still functioning efficiently.

Housing.—Seventy-three houses were reported on in the course of the year. One was in such a state as to be reported as unfit for human habitation.

The main housing problem in the Burgh is not the number of insanitary houses, but the degree of overcrowding. This is serious, as may be seen from the following table, in which overcrowded houses are classified :—

	2-3 inmates per room.		3 or more inmates per room.	
	Number.	Inmates.	Number.	Inmates.
One-roomed houses	.....	.....	2	9
Two-roomed houses	21	105	27	161
Three-roomed houses	6	44	4	43
Four-roomed houses	1	11	.....	.....
	—	—	—	—
Total	..... 28	160	33	213

From this it will be seen that 61 houses (over 13 per cent. of the total in the burgh) have more than two inmates per room.

The Council are alive to the importance of the question, and the steps to be taken in order to reduce overcrowding were under discussion at the end of the year.

Slaughter-house.—This has been visited from time to time and found well conducted.

Common Lodging-house.—Nothing requiring comment arose during the year.

Rubbish Dump.—The existing dump is now full, and enquiries are being made as to a new site at a greater distance from the Burgh.

Other Sanitary Work.—Twenty-nine intimations were sent regarding nuisances.

BURGH OF LOCHMABEN.

Water Supply.—Reduction of waste by more careful attention to fittings and taps has resulted in a smaller consumpt, and the Burgh was able to meet the drought of last summer without excessive inconvenience.

Sewage Disposal.—No serious cause for complaint occurred during the year, although the effluent from the filters was not so good as might have been expected, and the method formerly adopted for disposing of sludge was reported as unsatisfactory.

Housing.—The new houses at the Glebe site were completed and occupied early in the year, and the majority of the condemned houses at Marjoriebanks have been demolished.

Thirty-seven inspections were made during the year.

Five houses were renovated under the Burgh's Approved Scheme under the Housing (Rural Workers) Acts.

Nuisances.—Seventeen intimations were issued regarding nuisances.

BURGH OF LOCKERBIE.

Mr Walker reports :—

“ **Water Supply.**—During the year, which was one of the driest on record, the town had an unparalleled record in its water supply. The reservoir situated at Bankshill, which has a capacity of approximately fifteen and a half million gallons, never fell more than eleven inches, which

is equal to about a quarter of a million gallons. so at no time was the storage below the fifteen million gallons, equal to about three months' supply.

Filter Beds.—Two sand filter beds are provided, each with a filtering area of 1200 sq. ft., after which the filtered water is passed on to storage tanks of 240,000 gallons capacity. The filter beds were cleaned and aerated regularly each month.

The trunk main from the reservoir to the filter beds was seoured regularly each quarter, also the branch mains throughout the town.

Sewage Disposal.—The sewers throughout the town are of good construction, and did not give any trouble during the year.

All new drains, and alterations to drains, were examined and tested by me before being passed.

Sewage Works.—The sewage works are situated at a site well out of the town (approximately one mile). During the year a number of improvements have been carried out under the direction of Dr Ritchie, Medical Officer of Health for the Burgh, and Mr Hawley, County Analyst. A certain amount of the work has been experimental, a very successful part of which has been the cleaning of the contact beds by chemical action. Still further experiments are being proceeded with in connection with the treatment of waste milk which is discharged from the works of the Dumfriesshire Dairy Company. Another feature of note was the procuring of a power-driven diaphragm pump, which is proving a great asset in the de-sludging of the tanks. Other work carried out has been the construction of sludge-pits which have been found necessary in dealing with this branch of the work. Repairs and improvements such as the construction of new sheds, etc., to house plant have also been carried out at the works.

Slaughter-houses.—At the slaughter-houses a large business was done during the year in the slaughtering of animals. The numbers killed were as follows :

Oxen	...	...	...	485
Cows	...	...	...	64
Heifers	....	....	....	13
Calves	..	..	..	776
Sheep	..	....	...	30,970
Pigs	..	...	...	134
Total				32,442

A large list of repairs and improvements were done to the buildings during the year, which I may say are in first-class order. The garbage from the slaughter-houses naturally is of a large quantity. We were fortunate this year in getting it disposed of to one or two farmers in the district.

The inspection of meat is under the County Veterinary Officer.

Scavenging.—The household refuse continues to be collected by horse and cart; three forenoons in the week are utilised on the work, and as the coup is close to the town this method of collection is considered the most economical. The coup, which is situated on a boggy piece of land, is fenced in, and before the refuse is tipped down the peat moss is dug out and used for covering over the rubbish. The quantity of refuse handled is a little over 1000 tons during the year. There is also a special weekly collection of waste-paper, which is collected in bags and carted to a site well out of the town, where it is burned.

Schools.—The only school situated in the town is Lockerbie Academy—a building of modern construction with up-to-date sanitary arrangements.

Workshops.—The number of workshops in the Burgh is 22. They are all satisfactory in regard to their sanitary requirements.

Factories.—There are no factories situated within the Burgh.

Common Lodging-house.—There is only one common lodging-house within the Burgh, which meets the needs of the district, and is conducted in a satisfactory manner.

Burial Grounds.—There is one burial ground situated within the Burgh, the management of which is under the Local Authority.

Nuisances.—Several nuisances occurred during the year, chiefly in the nature of choked drains, which were all abated without any trouble.

Bakehouses.—There are five bakehouses situated within the Burgh, all of which are in good order.

Dairies.—There are two registered dairies within the Burgh, which were inspected regularly and found to be in order.

Sanitary Conveniences.—Further inspections during the year in regard to this work have resulted in five more houses being provided with indoor sinks and water supplies.

The number of houses without water supplies and sinks inside are 26, which are as follows :—

7 single taps serving 2 tenants.

2 single taps serving 3 tenants.

5 single taps serving 1 tenant.

1 single tap serving 1 tenant.

Number of water-closets used in common :—

Number of w.c.'s serving 2 tenants	.....	.....	13
Number of w.c.'s serving 3 tenants	.....	.....	2
Number of w.c.'s serving 4 tenants	.....	.....	1
Number of w.c.'s serving 5 tenants	.....	.....	0
Dry Closets	.....	.....	nil.
Privy Middens	.....	.....	nil.
Asli Pits	.....	.....	nil.

Housing.—Inspections have been carried out throughout the town during the year with regard to the housing of the working classes. This matter is at present receiving careful consideration by the Town Council."

BURGH OF MOFFAT.

Mr Sanson reports :—

“Water.—As mentioned in previous reports, the water supply to the Burgh is a gravitation one, and is derived from springs which rise on the lands of Granton, about three miles from the town. The location of the springs is amongst hill pasture and well removed from any means of contamination. The water is of excellent quality and ample quantity. There are no reservoirs, and filtration is unnecessary. The water is collected in wells and passed on into a concrete tank, from which it is taken direct into the trunk mains serving the Burgh. A considerable amount of repair work has been carried out during the year on the distribution mains, and periodical inspections of all water fittings were made with a view to preventing waste. Two complaints were received during the year regarding the shortage of water for domestic purposes. On investigation it was found that the shortage was being caused by incrustation in the service pipes. Throughout the past twelve months the daily average consumpt has been 92·5 gallons per head of population. Careful observations were made at the wells and tanks during the summer months, and I am glad to report that no variation in the water level falls to be recorded. The daily average consumpt of the Burgh for all purposes during the year was 231,660 gallons.

Housing.—Twenty-five houses have been inspected, and of these 14 must be regarded as falling below modern sanitary standards and will be dealt with forthwith.

The defects found were :—

General disrepair.

Damp walls.

Want of light and ventilation.

Insufficient and badly situated sanitary conveniences.

Lack of scullery and larder accommodation.

Low ceilings.

Want of sub-floor ventilation and no damp-proof course in walls.

Intimation of defects at a number of houses have been made to the proprietors, and in each case these defects have been rectified; in one case a new bathroom and scullery are being provided.

During the year under review the erection of ten houses for the Town Council at the Rogermoor site was completed. Those houses were built to provide accommodation for tenants from the slum clearance area in Annan-gate and Syme Street. The old houses in this area are now being demolished, and the Council have secured control of the sites with a view to providing an open space which may be available as a playing centre for the children of that district.

The total number of houses erected by the Town Council since 1919 is now as follows:—

Houses of 4 apartments	.....	.....	4
Houses of 3 Apartments	.....	.....	32
Houses of 2 apartments	.....	.....	8
<hr/>			
Total	.....	.....	44

Nine houses have been erected by private enterprise, for which a grant has been received.

The Council are now awaiting a report by the Medical Officer regarding the housing conditions of the Burgh so that they may determine as to what number of houses suitable for the working classes are required to meet the present demand.

Common W.C.'s.

Serving two tenants	—	—	—	—	7
Houses without water and sink inside the house					2
Dry closets	...	.....	.....	.....	nil.
Privy middens	....	.....	....	....	nil.
Ash pits	....	.....	.....	.....	nil.

Drainage.—Improvements noted in previous reports have had a beneficial influence on the sewerage of the town and on the efficiency of the sewage disposal works. The Council have made further efforts to free the sewers from the quantities of sub-soil water which was finding its

way into them, and the daily average flow from the works has been 12,160 gallons less than that recorded during 1932.

No complaints have been received throughout the year, and every effort is made to maintain the works in satisfactory manner so that the very best results may be obtained.

The grit chambers and humus tanks are cleaned out at regular intervals, the sludge being disposed of to the farmers on whose lands the works are situated.

Nine inspections of drainage systems by smoke were carried out. Complaints regarding the sewer in Reid Street were received, but on investigation it was found that there were no grounds for the complaint; but the Council decided to have this sewer flushed regularly to meet the wishes of the residents in this neighbourhood.

Cleansing.—The work of the Cleansing Department has been carried out in a highly satisfactory manner during the year. The refuse is deposited on private land outside the Burgh boundary, and a large area of swamp is being reclaimed. Daily collections are made throughout the town, and those are usually completed before 11 a.m. I take this opportunity of again bringing to the notice of the Town Council that one of the vehicles used for the collection of refuse is an ordinary uncovered cart. This method is most unsatisfactory, as the dust from this cart is blown through the streets and even into shops on windy days.

Nuisances.—There were 23 complaints received during the year, and in each case were immediately investigated. The number of nuisances dealt with was 37. In all cases where it was found necessary to issue intimations under Section 19 of the Public Health (Scotland) Act, 1897, those were readily attended to, and no further proceedings were necessary.

Slaughter-house.—The public slaughter-house continues to be maintained in a satisfactory manner. The premises are under the control of the Town Council, and are kept

clean and wholesome ; offal and manure are removed daily. Regular inspections are made by the Detention Officer and Meat Inspector appointed by the Local Authority under the Public Health (Meat Inspection) Regulations for (Scotland), 1923.

Animals slaughtered during the year numbered :—

Cattle	.....	.....	.....	.....	234
Sheep	.....	.....	.....	.....	1733
Pigs	.....	.....	.....	.....	15

Schools.—Fifteen visits of inspection were made to the schools in the Burgh, and in each case the premises were found to be well maintained. Moffat Academy, which has been rebuilt, was opened during the year. This building incorporates all the latest ideas in modern school construction, including automatic electric heating. At Warriston School a large outside swimming pool has been constructed for the use of the pupils.

Factories and Workshops.—In the supervision of the factories and workshops in the Burgh 136 visits of inspection were made. They were generally found to be well kept. In one case it was necessary to call upon the owner of a bakehouse to have his premises cleaned out and the walls lime-washed.

Common Lodging-house.—There is no common lodging-house in the Burgh. There is a small rest house where vagrants are given shelter for one night. This place is now too small for the needs of the district. It is under the control of the County Council. It is well conducted and kept scrupulously clean.

Dairies.—There is one milkshop in the Burgh, to which numerous visits have been made. On each occasion the premises were found to be in a satisfactory condition.

Burial Grounds.—The burial ground in the Burgh is under the control of the Town Council. It is seldom used, and is kept in good order."

BURGH OF LANGHOLM.

Mr Oliver reports :—

“ Water Supply.—There have been no material changes or innovations in connection with the water supply system during the year, and I am pleased to report that, despite the difficult nature of the season, an adequate supply of pure wholesome water was maintained.

During the exceptionally dry weather, when the amount of water coming from the springs was considerably depleted, the Town Council considered schemes to augment the supply. This was accomplished to the extent of 5000 gallons per day by the addition of the “ Drift Supply ” on Whita Hill, after satisfactory analytical reports regarding this supply had been received from the Medical Officer of Health.

The whole of the supply is clear spring water, free from any indications of contamination. The quantity available is sufficient, even in an exceptionally dry year, to keep the town adequately supplied for all domestic purposes.

Drainage and Sewage Purification.—The drainage and sewerage systems, which continue to give satisfactory service, have functioned properly during the year, and the work of flushing and dragging was periodically carried out.

An extension and all connections to the main sewers as well as all work on private drainage systems were inspected and tested before being put into use.

The sewage disposal works at Landsend were maintained without giving rise to any nuisance, and the effluent discharging into the river Esk was satisfactory. The routine work of sludging the tanks was carried out regularly, and 272 loads of sludge were disposed of at the refuse coup.

Scavenging and Cleansing.—The same system as in former years has been employed for scavenging and cleansing, and 996 loads of household refuse and 217 loads of waste-paper were dealt with.

The new dust cart mentioned in my last report was purchased and put into use during the year. This cart, which has a low loading line and is fitted with dust-proof covers, has added considerably to the efficiency of the department.

It has apparently been found necessary on several occasions to take the scavenger from his routine duties to assist in other departments, with the result that on these occasions the street cleaning has not received the attention this important work merits. It would be a commendable improvement if a scheme were compiled whereby every street received regular and systematic cleansing, also if a proper time-table were instituted and adhered to.

The town's refuse is disposed of at a coup at Wauchope Cauld, and as this depot is only 100 yards from the nearest dwellings it is essential that it be very carefully maintained. At present the amount of labour expended is hardly sufficient to achieve really satisfactory results; what is required is daily attention, and I would recommend that this question be considered along with my remarks on street cleansing.

It is the practice with many householders to put out their refuse several hours before the collection is due, and to allow the receptacles to remain on the street long after the collection has been made. I would earnestly request the public to assist in keeping the streets in a cleaner and more tidy condition by observing that the dust bin contains, as far as practicable, nothing but dry, incombustible refuse, that the receptacle is not overfilled, and wherever possible covered with a lid; also that it is not placed out on the street an undue length of time before the arrival of the cart, and is taken in as soon as possible after being emptied.

Nuisances.—The usual routine inspections were carried out, and the number of nuisances found to exist was not so large as in former years. In most of the cases dealt with a remedy was effected after verbal notice had been

given to the parties responsible for the nuisance. In one case a notice in terms of the Public Health (Scotland) Act, 1897, Section 19, was served, and thereafter it was found necessary to ask the Local Authority to take statutory action. In this case no remedy has yet been effected.

There are no closets on the conservancy system, earth closets, or privies within the Burgh. The number of water-closets serving more than one tenant and houses without water and sinks inside the house are as follows :—

Common water-closets serving 2 tenants	....	....	42
Common water-closets serving 3 tenants	....	....	22
Common water-closets serving 4 tenants	....	....	3
Common water-closets serving 5 tenants	...	....	2
Common water-closet serving 6 tenants	..	....	1
Houses without water and sinks inside the house	....		52
Ashpits serving one house only	...	....	5

The Local Authority reviewed the foregoing list, and decided to serve notices on the proprietors in every case where the work is practicable and expedient.

A ready response has been received from the proprietors concerned. In many cases the work is already in the hands of tradesmen, and during the current year this matter will be effectually dealt with.

Slaughter-houses.—The three private booths licensed by the Local Authority were inspected regularly and found in a satisfactory condition at the dates of visit.

The following carcases were inspected :—204 oxen, 4 heifers, 681 sheep, and 16 pigs.

In two cases it was found necessary to detain a carcase for inspection by the Meat Inspector.

Burial Grounds.—There are no burial grounds within the Burgh.

Factories and Workshops.—Sixty-nine inspections were carried out, and the premises visited were found to be in a satisfactory condition in all except one case, where it was necessary to serve a notice requiring the occupier to have the premises whitewashed.

Houses Let in Lodgings and Common Lodging-houses.

There are no common lodging-houses or houses let in lodgings within the Burgh.

Report for the year ended 31st December, 1933, on Proceedings taken as regards the Inspection, Improvement, and Demolition and Closure of Dwelling-houses.

HOUSING (INSPECTION OF DISTRICT) REGULATIONS (SCOTLAND), 1928.

1. Number of dwelling-houses inspected	.....	.....	164
2. Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation	.....	.....	23

HOUSING (SCOTLAND) ACT, 1925.

3. Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :—			
(a) Cases where requirements complied with by owners	.....	.....	nil.
(b) Cases where works carried out by Local Authority after failure of owners to do so	.....	.....	nil.
(c) Cases still pending	.....	.....	nil.
4. Number of houses of (a) one apartment, and (b) two apartments, for the erection of which the consent of the Local Authority has been given in terms of Section one hundred and eleven	.....	.....	nil.

HOUSING, TOWN PLANNING, &C. (SCOTLAND) ACT, 1919.

5. Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply :—			
(a) Cases where requirements complied with by owners	.....	.....	nil.
(b) Cases where works carried out by Local Authority after failure of owners to do so	.....	.....	nil.
(c) Cases still pending	.....	.....	nil.

HOUSING (SCOTLAND) ACT, 1930.

6. Number of dwelling-houses in respect of which notices were served under Section 14 (1)	2
7. Number of dwelling-houses rendered fit for human habitation following on notices under Section 14 (1)	2
8. Number of dwelling-houses in respect of which work has been done by the Local Authority under Section 15 (1)	nil.
9. Number of dwelling-houses in respect of which, in terms of Section 17, a demolition order or closing order under Section 16 (3) has been substituted for a notice under Section 14 (1)	nil.
10. Number of dwelling-houses in respect of which notices were served in terms of Section 16 (1)	2
11. Number of dwelling-houses referred to in 10 :—	
(a) which have been rendered fit for human habitation	nil.
(b) in respect of which undertaking has been given that the house will not be used for human habitation until it has been rendered so fit	2
(c) in respect of which demolition orders have been made under Section 16 (3)	nil.
(d) in respect of which closing orders have been made under Section 16 (3) and (4)	nil.
12. Number of dwelling-houses in respect of which closing orders have, in terms of Section 16 (3), been determined by the Local Authority, following upon the houses having been rendered fit for human habitation	nil.
13. Number of houses in respect of which advances have been made in terms of Section 34 towards cost of repairs and amount so advanced	nil.

Generally the housing accommodation is of satisfactory standard, and outwith the houses reported on as

unfit for habitation there are no cases of serious overcrowding. The chief defect observed during my routine inspections was the lack of light and ventilation in attic rooms. In the majority of houses where this defect occurs the occupiers are persons of substantially the same status as rural workers, and in these cases I would recommend to the proprietors the Town Council's scheme in terms of the Rural Workers Act, 1926.

To deal with the houses unfit for habitation the Town Council have in course of preparation a scheme to erect ten houses, which will be completed prior to 30th September, 1934."

LABORATORY REPORTS.

A. BACTERIOLOGICAL LABORATORY.

County Health Office,
County Buildings, Dumfries,

15th May, 1934.

*To The County Medical Officer,
County Buildings, Dumfries.*

Sir,

I beg to submit my report for the Bacteriological work performed in this laboratory during 1933.

During the twelve months ending 31st December 5666 bacteriological examinations were made, being an increase of 903 on the figure of the previous year.

For the purpose of comparing the figures of examinations made during 1933 and 1932, the following data are given :—

	1933.	1932.	Increase or Decrease.	
Swabs for Diphtheria	1269	1125	144	..
Sputa	398	373	25	.....
Widals	224	185	39	.....
Blood Cultures	10	7	3	.....
Blood Examinations	89	95	..	6
Cerebro-Spinal Fluid	28	39	..	11
Fæces	177	90	87	.....
Urines	340	282	58	.....
Pus and Pathological Fluids	70	74	..	4
Miscellaneous	474	229	245	..
Wassermann	243	208	35	.....
Gonococci	316	347	..	31
Milk	1555	1239	316	.....
Water	339	269	70	.....
Histological	37	61	..	24
Anthrax	82	115	..	33
Vaccines	15	25	..	10
Total	5666	4763	1022	119
Increase, 903.				

Swabs for Diphtheria.—These have been taken for the purpose of diagnosis, of determining the length of treatment, and of detecting carriers. They are not a true index of the amount of Diphtheria present in an area, as in some cases it is necessary to take six or seven or even more swabs before reporting that the throat is free from *C. Diphtheriæ*. Large variations may be expected from year to year. The year 1933 shows an increase of 144. The number of swabs taken in the County of Dumfries fell from 629 to 517. In the area outwith the County served by this laboratory the number of swabs submitted in the same period has risen from 496 to 752.

Sputa show an increase of 25.

Of the total of 398, 352 were examinations for the tubercle bacillus, the remaining 46 being for the determination of the causal organisms in respiratory diseases.

Widal's reaction, i.e., agglutination tests for bacilli of the enteric group, shows a slight increase on the number done last year.

Venereal Disease.—To help with the detection of this in suspected patients, 316 examinations were done for Gonococci, and 243 Wassermanns were done. This latter figure shows a slight increase, but the number of examinations for Gonococci counter-balances this with a slight decrease.

Milk.—The examinations for milk again show an increase, a total of 1555 being done as compared with 1239 for the year 1932. Of the 1555 examinations done, 694 were for the County Authorities and 861 for outside sources. As regards Dumfriesshire, these milks taken from various sources were subjected to examinations for (1) Bacterial count, (2) Presence of tubercle bacillus, (3) Presence of other pathogenic organisms, e.g., the causal organism of mastitis.

Examinations for the tubercle bacillus numbered 314, of which 10 were positive. These figures are not an index

of bovine tuberculosis, as animals which are obviously tuberculous from a clinical point of view are often taken under the Tuberculosis Order without a bacteriological examination. The samples submitted are usually those in which there is an element of doubt.

One hundred and twenty-six milks were tested for organisms other than tubercle bacilli and 254 milks for bacterial count. Out of this latter number 92 were for the purpose of testing graded milks and 162 for testing non-graded milks. Separate tables showing details of bacterial counts are given.

The following bacteriological standards for graded milk have been prescribed by the Scottish Department of Health :—

Certified.—The milk must not contain more than 30,000 organisms per c.c., or any *Bacillus Coli* in 1/10th of a c.c.

Grade A (Tuberculin Tested) and Grade A.—The milk must not contain more than 200,000 organisms per c.c., or any *Bacillus Coli* in 1/100th of a c.c.

Anthrax.—The number of examinations for anthrax shows a decrease. Of the total of 82, 3 were positive.

Histological examination of tissue still continues, and 37 specimens were submitted.

The examinations of the tissues were made for the purposes of diagnosis or prognosis or to see if further treatment was necessary.

Waters.—Three hundred and thirty-nine samples were examined, and of this number 77 were done for the Stewartry, 14 for Wigtownshire, and 9 for private individuals. The remaining 239 consisted of quarterly examinations of the supplies to the Special Water Districts, and of other waters used as, or intended for use as, domestic supplies. A table has been drawn up showing the results

of examinations of Special Water District supplies, so far as the presence of Coliform Bacilli is concerned.

The figure for miscellaneous examinations has risen considerably. The figure is accounted for to a great extent by the number of cows' sputa examined for tubercle bacilli.

In the County of Dumfries 257 cows' sputa were examined, and of these 45 were positive.

It is proposed in future to show the examination of cows' sputa as a separate item.

A table has been drawn up showing the sources of pathological material and the material submitted.

I have the honour to be, Sir,

Your obedient servant,

EDWARD ARMSTRONG.

WATER SUPPLIES TO THE SPECIAL WATER DISTRICTS.

Smallest amount of Sample in which Coliform Bacilli were detected.

Quarters.	I.	II.	III.	IV.
Lower Annandale ...	10 c.cs.	—	100 c.cs.	10 c.cs.
Bankshill ...	—	100 c.cs.	—	—
Blackshaw ...	—	—	—	—
Crawick... ...	100 c.cs.	10 c.cs.	0·1 c.cs.	10 c.cs.
Dumfries (Landward)	10 c.cs.	—	100 c.cs.	100 c.cs.
Eaglesfield ...	—	100 c.cs.	—	10 c.cs.
Ecclefechan ...	—	1 c.c.	—	—
Glencaple ...	100 c.cs.	100 c.cs.	1 c.c.	10 c.cs.
Kirkconnel ...	10 c.cs.	{ 0·1 c.cs. 0·1 c.cs.	{ 10 c.cs. 100 c.cs.	{ 10 c.cs. 100 c.cs.
Lockerbie Bugh ...	—	Not done	Not done	10 c.cs.
Moniaive ...	100 c.cs.	10 c.cs.	10 c.cs.	100 c.cs.
Netherwood, Kelton, & Craigs ...	—	100 c.cs.	1 c.c.	100 c.cs.
Penpont ...	100 c.cs.	—	0·1 c.c.	—
Ruthwell and Raffles ...	—	—	—	{ 10 c.cs. —
Rowanburn ...	100 c.cs.	1 c.c.	100 c.cs.	10 c.cs.
Thornhill ...	0·1 c.cs.	0·1 c.cs.	10 c.cs.	10 c.cs.

— Indicate Coliform Bacilli absent from 100 c.cs.

GRADED MILKS.

B. COLL.

Microbes per c.c.	No. of Samples.	B. COLL.					
		Absent from 0.1 c.c.		Present in 0.1 c.c.		Present in 0.01 c.c.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.
Under 30,000	76	56	60.87	14	15.21	3	3.26
Over 30,000 and under 200,000	11	7	7.61	—	—	3	1.09
Over 200,000	5	1	1.09	1	1.09	1	2.17
Total	92	64	69.57	15	16.30	7	6.52

100

NON-GRADED MILKS.

B. COLL.

Microbes per c.c.	No of Samples.	B. COLL.					
		Absent from 0.1 c.c.		Present in 0.1 c.c.		Present in 0.01 c.c.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.
Under 30,000	80	59	36.42	12	7.41	7	4.32
Over 30,000 and under 200,000	36	14	9.64	6	3.70	8	4.94
Over 200,000	46	5	3.09	6	3.70	11	6.79
Total	162	78	48.15	24	14.81	26	16.05
						34	20.99

TABLE SHEWING SPECIMENS SUBMITTED AND
SOURCE OF SUPPLY.

	Dumfries County.	V. D. Clinic.	Dumfries burgh.	Stewartry of Kirkcud- bright.	Wigtown County.	Dumfries and Galloway Royal Infirmary.	Private.	Total.
Swabs (Diphtheria) ...	517	...	156	140	452	4	...	1269
Sputa ...	163	...	122	65	35	10	3	398
Widals ...	100	...	45	44	35	...	...	224
Blood Cultures ...	4	...	3	...	2	1	...	10
Blood Examinations ...	19	...	49	11	6	1	3	89
Cerebro-Spinal Fluid ...	2	...	1	6	7	11	1	28
Fæces ...	134	...	13	14	16	...	...	177
Urines ...	171	...	96	39	19	11	4	340
Pus and Pathological Fluids	27	...	5	10	3	25	...	70
Miscellaneous ...	301	...	3	166	3	1	...	474
Wassermann ...	34	78	75	17	12	27	...	243
Gonococci ...	31	240	25	12	4	4	...	316
Milk ...	694	...	52	644	137	3	25	1555
Water ...	239	...	...	77	14	...	9	339
Histological ...	5	...	5	1	3	23	...	37
Anthrax ...	80	...	2	...	...	...	...	82
Vaccines ...	...	...	...	...	...	...	15	15
Total ...	2521	318	652	1246	748	121	60	5666

B. CHEMICAL LABORATORY.

Mr Hawley reports as follows :—

The Laboratory meets the administrative requirements of the Counties of Dumfries, Kirkcudbright, and Wigtown, and the Burghs therein. Work may be grouped concisely as under :—

(i) Analyses made for the County Councils in the area, which may be sub-divided—

(a) Analyses other than those made under the Food and Drugs (Adulteration) Act.

(b) Analyses made under the Food and Drugs (Adulteration) Act.

(ii) The examination of Medicines for the National Health Insurance Committee of the Counties and of the Burgh of Dumfries.

(iii) Sundry other analyses for approved institutions and individuals in Dumfries and Galloway.

Groups (a) and (b) comprised nearly 93 per cent. of the 1200 samples received during the year.

ANALYSES MADE FOR THE COUNTY COUNCILS.

(a) Dumfriesshire.

Work for the Public Health Department has continued mainly on the usual lines. Apart from a few problems of diverse nature it consists of the examination of Milk, Water, Sewage, and Sewage Effluent.

Four hundred and forty samples were submitted, representing 37 per cent. of the total number received in the Laboratory.

MILK.

The Milk (Special Designations) Order (Scotland), 1923, regulates the sale of Graded Milk, and *inter alia* fixes the minimum percentage of Milk Fat at 3.5.

One Creamery is licensed to produce Pastenrised Milk, and Grade " A " milk is produced on two farms : otherwise licences are for higher qualities, either Grade " A " (T.T.) or Certified.

Fifty-seven samples from 15 herds were submitted by the Veterinary Inspectors during their visits to the premises of licensees, and when examining herds. These were examined for Milk Fat, Non-fatty Solids, and for Freezing Point.

With few exceptions the animals composing these herds are pedigreed and recorded Ayrshires. The mean percentage of Milk Fat in these samples was 4.01 per cent.—an increase on the previous year (3.95 per cent.), and in excess of the mean for the preceeding 5 years (3.95 per cent.).

With these may be considered similar samples submitted from the other Counties.

The County Veterinary Inspector, Kirkcudbright, submitted 126 samples from 12 herds, which latter consist largely of pedigreed and recorded Ayrshires. The mean percentage of Milk Fat was 3.87, little different from the preceeding year.

Nine samples from 2 herds in Wigtownshire contained 3.53 per cent. Milk Fat.

Judged by those samples, there is a slight increase in the mean Fat content for Dumfriesshire offset by a similar decrease in Kirkcudbright.

Seven samples involving 5 herds contained less than 3.5 per cent. of Milk Fat, with a mean deficiency of .24 per cent. Similarly in Kirkcudbrightshire 13 samples from 7 herds showed a mean deficiency of .16 per cent.

Samples of Non-graded Milk taken under the Food and Drugs Act probably afford a fair index of the composition of milk as ordinarily retailed. During the year 95 such samples were taken in Dumfries and 110 in Kirkcudbright and Wigtown.

As in former years, the averages of these fall below the Graded supplies, but it must be remembered that they include several adulterated samples.

Comparative data in the form of quarterly averages are shown in Table 1.

Table No. 1.

Quarter.	Graded.				Non-Graded.			
	Dumfries.		Kirkcudbright.					
	Fat.	N.F.S.	Fat.	N.F.S.	Fat.	N.F.S.	Fat.	N.F.S.
1 ...	4.02	8.83	3.75	8.86	3.59	8.80		
2 ...	3.68	8.98	3.67	8.99	3.53	8.88		
3 ...	4.08	8.91	3.98	8.89	3.61	8.85		
4 ...	4.18	8.84	4.11	9.04	3.93	8.83		
Year.								
1933	4.01	8.87	3.87	8.95	3.68	8.82		
1932	3.95	8.85	3.84	8.93	3.66	8.85		
1931	3.84	8.94	3.94	8.93	3.79	8.82		
1930	3.94	8.92	3.98	8.83	3.78	8.84		

Although the Order prescribes no standard for Non-fatty Solids, these are usually determined for guidance and for use in Court. They show no material changes from the results of previous years.

The mean figures will be found beside the corresponding Fat figures in Table No. 1.

During the year 14 samples contained less than 8.5 per cent. of Non-fatty Solids. Generally these deficiencies were slight, and Freezing Point determinations when made indicated that they were due to natural causes.

OTHER SAMPLES.

Thirty-three other samples contained on an average 3.85 per cent. of Milk Fat—the minimum and maximum figures being 3.25 per cent. and 6 per cent. respectively. The Non-fatty solids all complied with the 8.5 per cent. limit.

WATER—POTABLE.

(a) Special Water Districts.

Examination is made of samples drawn from the Special Water Districts every quarter, and half-yearly from Lockerbie Burgh Supply. In the case of two districts it was necessary to examine additional samples.

The detailed analyses are given in Table No. 1 of the Appendix.

Apart from several samples from Glencaple Special Water District which contained undesirable matters (mainly of a vegetable nature) in suspension, and another

supply containing finely divided mineral matter, they call for little comment. In the supplies mentioned the suspended matter, while detracting considerably from the appearance of the water concerned, was in no way harmful.

(b) Other.

One hundred and forty-five samples were examined for potability—generally they had reference to proposed new supplies or to investigation of complaints regarding existing ones.

Broadly, they may be classified as follows :—Excellent, 15 ; Good, 87 ; Unsatisfactory, 43.

In 8 cases it was found desirable to make an examination of the saline residue.

Two of these examinations, made to determine whether water from a well was gaining access to an adjoining supply, showed that the supplies were, if not entirely independent, very nearly so.

Water from each of 2 wells and possessing remarkable plumbo-solvent properties was found to contain amounts of carbon dioxide largely in excess of these required to convert the carbonate present into bicarbonate, with only small proportions of silicates.

Three supplies drawn from shallow wells contained amounts of nitrates far beyond these usually found in these areas—one sample definitely containing mineral acid. Another supply (well) contained a substantial amount of potassium compounds.

Dr Armstrong reported that these waters were highly satisfactory bacteriologically, and examination of the ground negatived the probability of the nitrates originating from sewage pollution.

Some details of these last analyses are given over leaf.

Ions.	A.		B.	C.
	i.	ii.		
Sodium ...	} 1.91	5.14	3.67	{ 2.04
Potassium ...				{ 2.45
Calcium ...	8.97	4.64	4.86	4.26
Magnesium ...	1.55	.66	1.07	.72
Manganese ...	.015	...	.004	...
Bromide Br.	Strong	...	Faint	...
	reaction.		reaction.	
Chloride Cl.	6.80	4.26	3.16	2.68
Nitrate NC_3	20.56	14.90	7.13	1.56
Sulphate SO_4	6.58	6.91	9.48	6.53
Hydrocarbonate HCO_3	nil.	.3	5.93	11.16
Free Acid (HCl)	.28	...	...	...
Silicic Acid H_2SiO	2.00	1.78	1.17	.

The Nitrates in i. and ii. (from the same well) are equivalent to nearly 20 and 14 grains of Sodium Nitrate per gallon respectively. Sodium Nitrate is not an official drug of the British Pharmacopœia, and is rarely used in medicine. The B.P. Codex, however, quotes its dosage as 5-20 grains. Hence it appears that a maximum medicinal dose is on occasion present in a single gallon of this water. So far as could be ascertained no untoward effects were produced by its use.

Reference to the geological map showed that the sources were in close proximity to changes in the nature of the strata.

In 47 cases a restricted examination was made. Of these, 17 were taken from 2 wells near Canonbie. Both waters gave acid reactions due to dissolved carbon dioxide and showed remarkable plumbo-solvent properties. As the water was already hard, the removal of the carbon dioxide by means of limestone was not practicable, and a remedy was sought by substituting bitumen-lined steel pipes for the lead pipes then in use. This supply is still under observation.

Five samples of water from another source showed amounts of copper varying from nil to .08, in each case representing a considerable reduction in the figures previously obtained from this supply prior to limestone treatment. As another sample, however, contained Copper .46, the treatment has not proved entirely successful.

Three samples of water from a schoolhouse contained amounts of Lead varying from .46 before to .03 and .04 parts per 100,000 after treatment respectively.

The supply to another school had a faintly acid reaction and was practically free from Iron at its source. At the schoolhouse it was quite undrinkable on account of Iron compounds both in solution and suspension. This supply passed through nearly a mile of iron pipes of rather wide diameter, the trouble being further accentuated by the relatively small draw-off. This supply is still receiving attention.

The supply to one of the Burghs is treated with Alumino-ferric prior to filtration, to assist in the removal of peaty matter. Determinations of Alumina were made in 5 samples with a view to checking and, if possible, increasing the efficiency of filtration.

In another instance a distinct taste was noticeable in the first portions of the water drawn off at one tap on Monday mornings. Examination showed that iron was being dissolved on standing, and investigation of the system revealed faulty circulation with only a small draw off in this section of the main. The matter has since been remedied.

Nine samples from 5 sources contained undesirable Suspended Matter.

This consisted for the most part of the usual sand and grit, with vegetable debris and a variety of animal life—one sample particularly showing an interesting and extensive collection of the latter. The trouble in this case was due either to the absence of or faulty filtration.

Copper to the extent of .46 parts per 100,000 was present in another sample. In 2 instances water gave a presumptive reaction for the presence of a heavy metal, but confirmation of the latter could not be obtained.

Water, obtained at a depth of four feet in a graveyard, was investigated with a view to ascertaining the cause of its appalling stench, but with no satisfactory result.

During the routine examination for potability, metallic contamination was noted in 6 other samples. In one case as much as .19 parts Lead per 100,000 was present. The others did not contain more, and usually less, than .03 parts Lead per 100,000.

RIVER WATER.

The work of collecting information on the condition of the principal rivers was continued. The greater part of the year under review was marked by long drought and a high mean temperature, conditions which tend in several directions to accentuate the effect of any polluting discharge on the condition of a river.

Under these conditions, not only is the volume of the water in the river available for diluting the discharge diminished, but the higher temperature reduces its capacity for dissolving the necessary Oxygen and at the same time, by accelerating bio-chemical change, increases the immediate Oxygen demand. In brief, climatic conditions were much less favourable to the prevention of nuisance than is usually the case. It is therefore a matter for regret that pressure of other work prevented full use being taken of this opportunity for studying the effects of these abnormal conditions. During the year 48 samples were taken.

At the end of June 12 samples were taken on the non-tidal portion of the Nith between the March Burn and the Dumfries Burgh Boundary. Despite the conditions just detailed, the Dissolved Oxygen absorbed in 5 days (and referred to in future as Bio-chemical Oxygen demand, B.O.D.) indicated that even a few hundred yards below the Sewage Disposal Works at Kirkconnel, Sanquhar, and Thornhill the river came within the category "very clean" as defined by the Royal Commission on Sewage Disposal.

There was a decrease in the Dissolved Oxygen present just below the outfalls at Sanquhar and Thornhill, but in neither case did the amount fall below 72 per cent. saturation. It may be concluded, then, that so long as

these works are maintained at or near their present efficiency, nuisance is extremely unlikely.

In July 10 samples were taken from the River Annan; two of these collected just below the outfall from Moffat Sewage Disposal Works had B.O.D. of .39 and .45 parts per 100,000 respectively, *i.e.*, were in "doubtful" condition. In neither case did the percentage saturation of Oxygen fall below 73. A few yards further down the river was again "very clean" and was practically saturated with Oxygen.

Samples taken at Shillahill Railway and Road Bridges showed that the Turnmuir Burn had little or no effect on the condition of the Annan. The River Annan samples and 12 more taken from various tributaries all consisted of "very clean" water.

The condition of the Turnmuir Burn, which receives the effluent from Lockerbie Sewage Disposal Works, cannot yet be regarded as satisfactory during the summer months. Nevertheless, despite the small volume of water in the burn, samples taken at the Sawmill and at the confluence with the Annan showed a considerable improvement on those taken in the previous year—an improvement directly attributable to the policy adopted by the Council of that Burgh. Further improvement is, however, desirable, and in the absence of additional complications should be forthcoming.

Prior to the recommencement of lead mining at Wanlockhead an inspection was made of the Wanlock Water, commencing at its junction with the Crawick and continuing up to the settling ponds at Wanlockhead. It was noted that the cessation of mining had caused a considerable change in the appearance of the river, the dull and leaden look had disappeared, the water being clear and sparkling. As anticipated, Lead was absent from 5 samples of water examined.

SEWAGE AND SEWAGE EFFLUENT.

Three samples of Effluent from Thornhill had a mean Biological Oxygen Demand of rather less than one part

per 100,000 and were well nitrified. According to the Royal Commission on Sewage Disposal, the Biological Oxygen Demand of a standard effluent should not exceed 2 parts per 100,000. Two samples of Tank Liquor from the same works contained undue amounts of Suspended Matter, and inspection of the works showed that more frequent sludging was desirable.

Two samples of Sewage Effluent from Moniaive had a higher Biological Oxygen Demand than usual, although nitrification was satisfactory.

One sample from each of the works at Kirkconnel and Moffat had Biological Oxygen Demand of not less than 1 part per 100,000 in each case.

The problem at Lockerbie Sewage Disposal Works is complicated by the antiquated design of the works, and by the presence in the sewage of large volumes of creamery waste and separated milk. The main difficulty in the works themselves is the lack of sludging arrangements, the preliminary settling tanks becoming filled with fermenting sludge which in a modern works would ordinarily be removed. Sedimentation becomes impossible and solid matter passes on to the filters, which become increasingly inefficient.

During the early part of the year attempts were made to remove this and other solid matter from the filters by the use of Chlorine—in the form of bleaching powder. Large amounts of solids were washed out of the filters, the condition of which has been very considerably improved. The employment of a power driven pump for sludging has materially assisted in keeping the tanks free from fermenting solids, but so far it cannot be said that an entirely satisfactory solution for this part of the problem has been found.

Large volumes of more or less actively fermenting sludge were removed when cleaning the tanks and deposited in nearby sludge pits.

Fermentation has gone on since with the evolution of large volumes of marsh gas and the usual absence of any offensive odour.

During its passage through the large sedimentation tank the mixture of creamery waste and sewage becomes increasingly acid, and lime is being added to reduce the resultant acidity. The full effect of this treatment is not yet apparent.

Generally, ponding and similar troubles have not yet been encountered in the Sewage Works in the County, although the Achorutes Viaticus which are present at most works have been less in evidence than usual.

FERTILISERS AND FEEDING STUFFS ACT.

Four Fertilisers but no Feeding Stuffs were received. In each case the composition of the Fertiliser was in accordance with the statement on the invoice, account being taken of the appropriate Limits of Variation.

MISCELLANEOUS.

Five samples of Urine examined conjointly with water samples all contained appreciable amounts of Lead. Toxicological examinations were made of Lard and of Sheep Viscera, but with entirely negative results. Sand and Alumino-ferrie were also examined for suitability for use in water filtration plant.

Work done for the Public Health Department is summarised as follows :—

Table No. 2.

PUBLIC HEALTH DEPARTMENT.

Milk (Certified Grade A.T.T. and Grade A)	...	57	
Other	... ..	33	
		—	90
Water (1) Potable.			
(a) Special Water District Supplies	...	...	69
(b) Others.			
Excellent	... ..	15	
Good	... ..	87	
Unsatisfactory	... ..	43	
		—	145
(c) Examination of the Saline Residue	...	...	4
(d) Partial	... ..	...	47
(2) River	... ..	...	48
Sewage and Sewage Effluent	... ..	...	22
Fertilisers	... ..	...	4
Miscellaneous	... ..	...	11
		—	440
		—	—

Under the Food and Drugs (Adulteration) Act, 1928, 176 samples of articles of Food and Drugs were submitted on behalf of the Joint Committee. These are considered later (pages 121 and 122).

KIRKCUDBRIGHT COUNTY COUNCIL.

The County Veterinary Inspector submitted 135 samples of Milk. These were taken from Graded Herds or otherwise in connection with the Milk (Special Designations) Order (Scotland), and for comparative purposes have been considered with similar samples taken in Dumfriesshire.

Of 42 samples of Water, 22 were regarded as unsuitable for dietetic use and 3 of doubtful purity. Another sample examined for metallic contamination was free from Lead and Copper. One sample of Burn water alleged to be polluted by mineral oil was found to contain oil to the extent of .26 part per 100,000.

In the Stewartry, as in many other counties, the long continued summer drought materially increased the difficulties of small local authorities in maintaining adequate water supplies. A number of samples taken from the Gull Loch and feeders, which it was hoped would provide a supply for Kippford and that neighbourhood, were unfortunately, in the absence of special methods of purification, unsuitable for dietetic use.

Early in October the Town Council of Dalbeattie were forced by water shortage to have recourse to the River Urr. It was proposed originally to pump river water into the main at the point where the latter crosses the river, and thus into the reservoir (the valve towards the Burgh being closed meanwhile), the water returning by the same main and passing through the pressure filters prior to distribution.

The condition of the river water, however, rendered previous purification essential, and a simple method of Chlorination was adopted. In connection with the operation of that plant, I would make special mention of

the services rendered by Mr W. M. Carriek, the District Sanitary Inspector.

The water scheme presently contemplated should go a long way to prevent a recurrence of such inconveniences and difficulties.

One hundred and seventy-three samples of Food and Drugs also submitted are considered later (page 114).

WIGTOWNSHIRE COUNTY COUNCIL.

During the year 9 samples of Milk taken under the Milk (Special Designations) Order (Scotland) and 19 others were received. They are considered with those taken in Dumfries and Kirkeudbright.

Of 14 samples of water examined for potability, only 2 could be considered really suitable for dietetic use. 7 samples were taken in connection with the water shortage at Portpatrick—from the reservoir and 2 wells. 6 were unsatisfactory; the remaining sample, which consisted of filtered water, was satisfactory chemically, but was not of very high bacteriological purity. Certain suggestions were made to the Medical Officer of Health in the event of chlorination being considered desirable.

In the report for last year reference was made to the presence of green algae in the storage tanks of a small water supply. The supply was derived mainly from a well, copper sulphate being added to inhibit algal growth in the tank. The use of augmentation water from another source brought about a recurrence of the trouble. From an inspection of the supply and tanks it was considered that treatment of the augmentation water was necessary, and so far this procedure has proved satisfactory. Some of this water examined later for the presence of Copper contained only very small traces of that metal.

Two samples of Burn Water taken above and below the point of discharge of a septic tank liquor were both well oxygenated and consisted of "very clean" water, from which it was concluded that the discharge was not likely to cause nuisance.

One hundred and eight samples of Food and Drugs submitted by the County Sanitary Inspector and the Sanitary Inspector for Stranraer are considered with the other Food and Drugs samples.

FOOD AND DRUGS ACT.

Samples are received from Dumfriesshire, Kirkcudbrightshire, and Wigtownshire.

Particulars of the number and nature of these samples are shown in Appendix 2.

Eighteen samples (4 per cent.) were certified as not genuine. Particulars of these are given below.

Table No. 3.

				Milk.	
DUMFRIESSHIRE.				Depression	Remarks.
Fat.	N.F.S.	T.S.	Ash.	of F.P.	
2.90	8.94	11.84	.79	...	3% Deficient in Fat.
2.93	8.60	11.53	.76	...	2% Deficient in Fat.
2.54	8.75	11.29	.74	...	15% Deficient in Fat.
1.30	8.78	10.08	.77	...	56% Deficient in Fat.
2.95	8.47	11.42	.74	...	1% Deficient in Fat.
2.90	8.62	11.52	.77	...	3% Deficient in Fat.
3.80	8.38	12.18	.79	-536° C.	.12% Deficient in N.F.S.
3.70	8.38	12.08	.71	-551° C.	.12% Deficient in N.F.S.
3.80	8.20	12.00	.87	-546° C.	.30% Deficient in N.F.S.
KIRKCUDBRIGHTSHIRE.					
2.88	8.75	11.63	.75	-554° C.	4% Deficient in Fat.
2.62	8.73	11.35	.76	-544° C.	12% Deficient in Fat.
1.87	9.11	10.98	.90	-553° C.	37% Deficient in Fat.
WIGTOWNSHIRE.					
3.20	8.44	11.64	.72	-548° C.	.06% Deficient in N.F.S.
3.15	8.28	11.43	...	-557° C.	.22% Deficient in N.F.S.
3.00	8.45	11.45	...	-526° C.	.05% Deficient in N.F.S.
3.05	8.27	11.32	...	-557° C.	.23% Deficient in N.F.S.

KIRKCUDBRIGHTSHIRE.

Barley -Sulphite Preservative equivalent to Sulphur Dioxide,
42 parts per million.

WIGTOWNSHIRE.

Butter -1% excess of water.

In 9 instances Milk contained less than 3 per cent. of Milk Fat, but only in 4 cases did the deficiency warrant the institution of legal proceedings. Convictions were obtained in all 4 cases.

Seven samples of Milk were deficient in Non-fatty Solids, but in 6 cases the Freezing Point indicated that the milk was in all probability in its natural condition. Although the Non-fatty Solids in the remaining sample fall only slightly below the 8.5 per cent. presumptive limit of the Sale of Milk Regulations, the Freezing Point (-526°C.) indicates the presence of 3.4 per cent. of added water.

The remaining adulterated samples consist of Barley containing Sulphite Preservative, and Butter with an excess of water. Subsequent samples from the same sources were satisfactory.

CRYSCOPY OF MILK.

The determination of the Freezing Point was continued throughout the greater part of the year. The results generally confirmed the observations made in the last report, although a slight increase was noticed in the mean Δ . In a period of a little over 2 years nearly 850 samples have been examined. The figures (Table No. 4) indicate that samples from various sources differ only slightly in the mean Δ , and if -530° be taken as the minimum Δ for genuine milk, watering is practically unknown in Dumfries and Galloway.

Table No. 4.

Samples received in 1933.

(1) From County Veterinary Inspectors.					
(a) Graded.				No.	Mean. Δ
Dumfriesshire	...	...	...	44	$\cdot 551^{\circ}\text{C.}$
Kirkcudbright	...	...	...	99	$\cdot 552$
Wigtownshire	...	...	...
(b) Others	...	...	...	32	$\cdot 552$
(2) Received under Food and Drugs Act				164	$\cdot 552$
				<hr/> 339	<hr/> $\cdot 551$
Received during period 1931-3.					
Graded	...	...	...	389	$\cdot 549$
Sundry Others	...	...	...	104	$\cdot 548$
Food and Drugs Act	...	...	...	351	$\cdot 549$

Towards the end of the year the routine use of this test was discontinued, and determinations are not now

made unless the Non-fatty Solids fall below the 8·5 per cent. presumptive limit. In such cases the test is indispensable.

NATIONAL HEALTH INSURANCE.

During the year 19 Medicines were received from the Insurance Committees of Dumfriesshire, Kirkcudbrightshire, Wigtownshire, and Dumfries and Maxwelltown Burgh. These consisted of 14 liquid and 5 solid medications. With 3 exceptions the amounts of components found agreed very closely with those prescribed. In one case an apparent excess was due to the presence of a considerable quantity of Undissolved Sodium Bicarbonate. In another case Magnesium Carbonate had been prescribed in suspension. There was a deficiency in Magnesium Carbonate, but the other components had been dispensed accurately, and it appeared that the deficiency was due to difficulties of sampling and not to lack of care in dispensing.

The remaining sample was deficient in Potassium Iodide to the extent of ·33 dr., or approximately 15 per cent.

The procedure adopted when taking samples under the scheme closely resembles that of the Food and Drugs (Adulteration) Act. The sample is divided into 3 parts, each being duly labelled and sealed. One portion is handed back to the pharmacist, another delivered to the Analyst, the third being retained for use in the event of a dispute. In this case the pharmacist involved had his portion analysed independently, the counter-analysis being in close agreement with the original.

SUNDRY.

Other analyses are made for local authorities and for approved institutions and individuals in Dumfries and Galloway. These comprise 20 samples taken in connection with the steam raising plant at Lochmaben Sanatorium and the alleged pollution of a trough by "oily" water.

The Lochmaben Water Supply, untreated, is unsuitable for steam raising, and for four years has been treated

by means of Lime and Soda. The proportions of chemicals added are regulated according to the condition of the boiler water, which latter is ascertained by periodical analyses. Treatment has now been more or less standardised and fewer tests are necessary, particularly as alkalinity tests of the feed water are conducted regularly by the boiler house staff.

Other miscellaneous samples number 40.

Twenty-three of these consist of water for potability. One sample consisting of water taken from the River Urr was examined on behalf of Dalbeattie Town Council. Subsequently, after chlorination, the river water was used to augment the Burgh Supply (page No. 112). The remaining 17 may be summarised thus :—

Fertilisers	.....	.....	.....	.....	10
Feeding Stuff	.....	.....	.....	.....	1
Milk (1 Human)	.....	.....	.....	.....	3
Margarine	.....	.....	.....	.....	3

In no case do they call for comment.

A table showing the total number of analyses made during the year is given in the Appendix.

JOHN W. HAWLEY.

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine (Cl).	Nitrates (N ₂ O ₅).	Nitrites (N).	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours.	Iron (Fe).	pH Value.
Lower Annandale	...	8.16	6.16	2.00	1.10	.216	Nil.	.0012	.0134	.365	.004	7.4
	Do.	10.60	6.32	4.28	1.20	.185	Nil.	.0026	.0092	.253	.004	7.4
	Do.	11.12	7.92	3.20	.90	.185	Nil.	.0008	.0082	.276	.040	8
	Do.	9.6	7.2	2.4	1.00	.031	Nil.	.0016	.0102	.121	.007	8.4
Do. ...	...	10.16	8.56	1.30	1.20	.185	Nil.	.0012	.0090	.319	.010	7.4
	Do.	10.68	6.80	3.88	1.10	.062	Nil.	.0012	.0072	.134	.003	8
	Do.	8.64	6.64	2.16	1.10	.123	Nil.	.0010	.0038	.040	.004	7.4
	Do.	18.80	17.60	1.20	1.10	.185	Nil.	trace	.0024	.025	trace	8
Bankshill	...	19.92	15.76	4.16	1.10	.740	Nil.	Nil.	.0008	Nil.	trace	8
Do.	...	21.44	15.44	6.00	1.20	.308	Nil.	trace	.0006	Nil.	.006	8
Do.	...	20.40	18.96	1.44	1.00	.370	Nil.	trace	.0018	Nil.	trace	7.4
Blackshaw	...	11.28	6.10	4.88	1.60	1.08	Nil.	trace	.0012	Nil.	.007	6.4
Do.	...	12.40	6.24	6.36	1.80	1.284	Nil.	.0008	.0020	Nil.	.005	6.4
Do.	...	7.20	3.76	3.44	1.60	.837	Nil.	Nil.	trace	Nil.	.01	6.4
Do.	...	10.64	6.24	4.40	1.70	1.284	Nil.	.0006	.0008	Nil.	.003	6.4
Crawick	...	1.00	2.18	1.52	1.00	.062	Nil.	.0012	.0048	.159	.003	7
Do.	...	6.16	5.04	1.12	1.00	0.62	Nil.	trace	.0036	.102	.005	7
Do.	...	7.36	4.96	2.40	.90	.015	Nil.	trace	.0054	.140	.004	8
Do.	...	8.00	5.60	2.40	1.00	.062	Nil.	.0012	.0058	.077	.007	7.4
Dumfries Landward	...	12.24	7.52	4.72	1.40	.478	Nil.	.0012	.0098	.322	trace	8
	Do.	11.68	7.76	3.92	1.40	.154	Nil.	.0018	.0130	.273	trace	8
	Do.	12.32	8.64	3.68	1.10	.185	Nil.	.0008	.0120	.267	Nil.	8.4
	Do.	15.84	10.96	4.88	1.20	.177	Nil.	.0014	.0150	.322	Nil.	8.4

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine (Cl).	Nitrates (N ₂ O ₅).	Nitrites (N).	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours.	Iron (Fe).	pH Value.
Eaglesfield	1	17.60	15.52	2.08	1.30	.247	Nil.	Nil.	.0016	.013	.008	7½
Do.	2	16.48	10.16	6.32	1.10	.123	Nil.	Nil.	trace	Nil.	trace	8
Do.	3	17.92	16.56	1.36	1.20	.370	Nil.	Nil.	trace	trace	.003	7½
Do.	4	17.20	13.92	3.28	1.20	.185	Nil.	Nil.	.0010	Nil.	.003	8
Ecclefechan	1	20.88	16.32	4.56	1.40	.77	Nil.	trace	.0014	Nil.	Nil.	8
Do.	2	20.64	12.40	8.24	1.10	.524	Nil.	.0006	.0012	Nil.	trace	8
Do.	3	19.92	14.24	5.68	1.40	.452	Nil.	trace	trace	Nil.	.007	8
Do.	4	19.20	14.80	4.40	1.20	.524	Nil.	Nil.	.0016	Nil.	.006	8
Glencaple	1	15.00	7.20	7.80	2.00	.925	Nil.	.0010	.0084	.063	trace	7½
Do.	2	15.60	8.64	6.96	2.20	.771	Nil.	.0018	.0136	.063	.007	9½
Do.	3	14.96	9.60	5.36	2.60	.062	Nil.	.0028	.0290	.170	.013	9½
Do.	4	17.52	10.48	7.04	2.10	2.409	Decided reaction.	.0014	.0142	.194	.005	8
Kirkconnel	1	13.28	10.72	2.56	.90	.123	Nil.	trace	.0034	.129	Nil.	8
Do.	1	3.84	2.80	1.04	.90	.062	Nil.	.0018	.0050	.275	.004	6½
Do.	2	17.20	12.64	4.56	.90	.154	Nil.	.0006	.0084	.399	trace	8
Do.	2	7.04	3.76	3.28	.90	.123	Nil.	.0010	.0096	.614	.075	8
Do.	3	23.68	18.80	4.88	1.20	.154	Nil.	trace	.0032	.057	.006	8½
Do.	3	7.76	4.88	2.88	.90	Nil.	Nil.	.0010	.0048	.178	.002	8
Do.	4	22.24	19.20	3.04	1.00	.154	Nil.	trace	.0024	.030	trace	8
Do.	4	8.64	6.32	2.32	.80	.031	Nil.	.0006	.0052	.071	.002	7½
Lockerbie Burgh	1	12.48	10.64	1.84	1.20	.154	Nil.	.0006	.0062	.135	trace	8
Do.	4	15.60	12.96	2.64	1.00	.185	Nil.	.0012	.0072	.130	Nil.	8

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine (Cl.)	Nitrates (N ₂ O ₆)	Nitrites (N)	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours	Iron (Fe).	pH Value.
Moniaive	1	4.96	3.44	1.52	.90	.123	Nil.	.0008	.0070	.144	.003	7
	2	8.88	5.52	3.36	1.00	.062	Nil.	.0014	.0056	.069	trace	8
	3	10.40	9.12	1.28	1.00	.031	Nil.	.0006	.0034	.100	.006	7½
	4	9.44	5.20	4.24	1.10	.062	Nil.	.0008	.0054	.072	Nil.	7½
Netherwood, Kelton, and Craigs Do.	1	12.88	10.24	2.64	1.30	.308	Nil.	.0012	.0034	.020	.010	8
	2	16.56	13.76	2.80	1.30	.247	Nil.	.0010	.0072	.064	.003	8
	3	19.04	14.96	4.08	1.40	.154	Faint reaction	.0044	.0044	.053	.009	7½
	4	19.20	16.24	2.96	1.40	.185	Nil.	.0006	.0034	.013	.005	9½
Penpont	1	7.84	4.80	3.04	1.00	.123	Nil.	trace	.0024	Nil.	Nil.	7
	2	8.80	6.00	2.80	1.00	.031	Nil.	.0012	.0018	Nil.	.008	6½
	3	7.84	6.64	.80	1.00	.123	Faint reaction	.0026	.0016	.019	.002	6½
	4	8.88	7.60	1.28	1.00	.123	Nil.	Nil.	.0018	Nil.	trace	6
Ruthwell and Raffles Do.	1	6.80	4.56	2.24	1.90	.092	Nil.	.0008	.0048	.084	.005	8
	2	10.64	7.52	3.12	1.80	.093	Nil.	.0014	.0062	.108	Nil.	7½
	3	10.32	8.72	1.60	1.60	.031	Nil.	.0010	.0040	Nil.	.007	7½
	4	10.08	8.00	2.08	1.50	.031	Nil.	.0012	.0102	.118	.006	7½
Rowanburn Do.	1	10.96	4.60	6.96	1.10	1.376	Nil.	Nil.	.0032	.058	.005	6½
	2	13.20	8.24	4.96	.72	1.284	Nil.	.0012	.0052	.281	.004	7½
	3	12.16	8.56	3.60	.90	1.014	Nil.	trace	.0050	.010	.030	6½
	4	11.28	9.52	1.76	1.10	1.133	Nil.	trace	.0032	.046	.008	6½
Thornhill	1	12.16	6.80	5.36	1.10	.401	Nil.	.0012	.0028	.044	.003	7½
	2	9.28	7.44	1.84	1.20	.524	Nil.	Nil.	.0008	.015	.005	7½
	3	10.32	7.44	2.88	1.20	.154	Doubtful reaction	trace	.0006	.013	.008	6½
	4	9.9	8.32	1.60	1.10	.216	Nil.	trace	.0020	Nil.	trace	6

Appendix 2.

Table showing the Number and Nature of Samples received under the Food and Drugs Act.

Article.	County Councils of			Total	Adulterated.
	Dfs.	Kbt.	Wig.		
Milk	95(9)	74(3)	36(4)	205	16
Milk (Condensed) ... ..	...	...	2	2	...
Cream (Tinned) ... ..	...	...	2	2	...
Butter	27	15	11(1)	53	1
Margarine ... ..	...	10	5	15	...
Lard	17	5	1	23	...
Cheese	5	...	2	7	...
Tea ... ..	...	15	2	17	...
Coffee	8	3	3	14	...
Cocoa ... ..	...	3	...	3	...
Sugar ... ..	...	6	...	6	...
Jam ... ..	...	2	2	4	...
Whisky ... ..	...	18	7	25	...
Beer ... ..	...	...	1	1	...
Cream of Tartar	9	3	6	18	...
Baking Soda ... ..	...	2	1	3	...
Baking Powder ... ..	...	1	...	1	...
Egg Substitute ... ..	...	...	1	1	...
Pepper	1	3	5	9	...
Ginger	3	1	2	6	...
Cinnamon	2	1	...	3	...
Barley ... ..	...	3(1)	1	4	1
Tapioca ... ..	...	...	1	1	...
Rice ... ..	...	4	...	4	...
Sausages ... ..	...	...	8	8	...
Potted Beef and Ham ... ..	...	...	1	1	...
Olive Oil	1	...	...	1	...
Epsom Salts	1	...	...	1	...
Liquorice Powder	1	...	...	1	...
Seidlitz Powder (D'ble St.)	1	...	...	1	...
Arrowroot... ..	3	...	1	4	...
Strawberries) ... ..	...	...	1	1	...
Soda Water	1	...	...	1	...
Vanilla Flavouring ... ..	...	...	1	1	...
Syrup of Figs ... ..	...	...	1	1	...
Apple ... ..	...	1	...	1	...
Currants ... ..	...	...	1	1	...
Beans ... ..	...	...	1	1	...
Chocolate Powder	1	...	...	1	...
Vinegar ... ..	...	1	1	2	...
Roast Fat ... ..	...	1	...	1	...
Oatmeal ... ..	...	1	...	1	...
Essence of Almond ... ..	...	...	1	1	...
Total	176(9)	173(4)	108(5)	457	18

Appendix 3.

	County Council of Dfs. Kbt. Wig.			Insurance Committee of Dfs.Co. Dfs. Kbt. Wig.			Dfs. and Call. Joint Sana. Board.	Other Auth. and Private.	Total.
Water	313	44	17	...	...	...	20	23	417 (375)
Sewage and Sewage Effluent...	22	...	...	...	...	...	...	...	22 (31)
Food and Drugs	176	173	108	...	...	...	...	...	457 (365)
Milk (S.D. Order, and others)	90	135	28	...	...	...	...	...	253 (295)
Fertilisers and Feeding Stuffs	4	...	...	...	...	...	...	...	4 (4)
Medicines under N.H. Scheme	...	...	...	5	4	6	...	...	19 (16)
Miscellaneous	11	...	...	...	...	...	...	17	28 (30)
Total	616	352	153	5	4	6	20	40	1200
	(587)	(324)	(122)	(4)	(4)	(4)	(35)	(32)	(1116)

REPORT

ON

MEDICAL INSPECTION

Report on Medical Inspection

For the Year ending 31st July, 1934.

I.—List of Staff.

Chief School Medical Officer.

JOHN RITCHIE, M.B., Ch.B., M.R.C.P.E., D.P.H.

Assistant School Medical Officers.

E. B. MUNRO, M.B., Ch.B., D.P.H., Lieut.-Col. I.M.S. (Retd.)

AGNES F. TURNER, M.B., Ch.B., D.P.H.

School Dentist.

AGNES J. DALZIEL, L.D.S.

Consulting Oculist.

JAMES A. ROSS, M.A., M.B., Ch.B., Carlisle.

The Medical Officer of Health for the Burgh of Dumfries acts as Deputy Chief School Medical Officer within the Burghal Area, to ensure co-operation with the Public Health Department of the Burgh.

II. (a).—Number of Schools.

The number of schools under medical inspection is 100.

(b).—Number of Children.

The average number of children on the roll was 13,959.

III.—Number of Routine Visits to Schools.

The number of routine visits to schools for systematic examination was 296.

IV.—Number of Special Visits.

(A whole day comprises two visits.)

For Examination of Errors of Refraction	.....	.....	17
For Examination for Infectious Diseases	.....	.....	13
For Examination for Physical or Mental Defect	.....		60
For Examination of Verminous Children, Absence from School, etc.	.....	.....	7
			—
			97
			—

V.—Sanitary Conditions of Schools.

A. LIGHTING.

Rooms in two schools were dark ; in one case this was due to the overgrowth of trees in the playground, in the other the windows were too small.

Electricity has been introduced into many of the schools, but there are four large Burgh schools which have not been wired and in which electric light is very necessary, as these schools are much used in the winter evenings.

B. VENTILATION.

In one school many windows will not open, and ventilation consequently is inefficient. In another it is stated that smoke from the open fire-place is blown back into the classroom.

C. HEATING.

Most of the Country schools are very cold, and, although open fires are well stoked, it is impossible in most cases to heat the large rooms efficiently. In such instances central heating could be installed with benefit. Paraffin stoves do not meet the case, as they vitiate and taint the atmosphere.

D. CLEANSING.

Thirty-seven schools have been wholly or partially redecorated. This implies colour-washing the rooms,

painting the inside and outside of the school buildings where necessary, and white-washing the latrines.

E. WATER SUPPLY.

In some areas there is a chronic shortage of suitable water, which has been much aggravated during the summer.

F. SANITARY CONVENIENCES.

In twenty-three schools with a gravitation supply of water available there are no water-closets. In nine of these the water supply is stated to be inadequate on occasion, and in one the disposal of sewage presents special difficulties. Fifteen schools have pail closets; in three instances the latrines are placed over a burn, which is not a satisfactory arrangement on account of the possibility of drought.

The following improvements are suggested:—(a) the provision of doors to each closet compartment; (b) very low closet seats for infants—the present seats in many instances are too high.

Rain water in one instance collects at the entrance to the latrine, precluding admission.

In two of the academies the latrines require renovation.

Water-closets have been installed in two schools during the year.

Some schoolhouses situated in an area where there is a gravitation supply of water have no bathrooms or hot water supply.

One four-teacher school has no special sanitary accommodation for teachers within the school, which is inconvenient.

G. PLAYGROUNDS.

These as a rule are too rough and unsuitable, as they are covered with large ashes or huge stones, which tend to prevent the children playing in them and are causes of twisted ankles and many abrasions. Ashes, also, are apt to choke the surface drains, and when wet adhere to the feet and so make the school floors dirty. As far as

possible cement, tarmacadam, or other suitable material should be used to cover the surface of the playgrounds. This would allow games to be played and drill to be taken in the open air. One school playground is on such a steep gradient that the children play on the main road. One school has merely a strip of ground round the school buildings, which is quite inadequate.

H. DESKS.

Long desks are still in use in one school.

I. MISCELLANEOUS.

Two small schools were supplied with new floors.

One entrance roadway was repaired.

One school was flooded for one day.

The ditches round one school have not been regularly cleaned. As these take the sewage from the school and schoolhouse they are insanitary.

VI.—Organisation and Administration.

A. SYSTEM OF MEDICAL EXAMINATION.

The Department of Health requires the examination of each pupil at least three times during school life :—

- (1) As soon as possible after admission to school —
“Entrants.”
- (2) During the intermediate stages (ages 9, 10, 11) —
“Intermediates.”
- (3) Towards the end of the elementary school period —
“Leavers.”

The instruction by the Department of Health, “That every school be examined twice yearly at reasonable intervals,” has been carried out.

B. SCHOOL NURSES.

The District Nurse or Health Visitors are present, as far as possible, at medical inspections.

C. ARRANGEMENTS FOR "FOLLOWING UP."

The table below gives details.

Nursing Association.	Cases notified.	Cases visited.	Number of reports.
Annan	124	122	295
Lower Annandale	110	95	256
Canonbie	22	22	34
Carrutherstown	14	14	34
Cumberland	20	20	39
Dumfries Landward	52	51	134
Dunscore	19	19	30
Eskdalemuir	13	13	18
Kirkconnel	94	94	175
Kirkmahoc	20	38*	141
Kirkmichael	7	7	13
Lochmaben	48	46	72
Lockerbie	49	51*	51
Moffat	38	32	56
Moniaive	10	10	15
Penpont	17	17	33
Ruthwell	9	10*	28
Sanquhar	44	44	90
Stewartry	8	7	22
Thornhill	65	62	142
<hr/>			
Total	783	774	1678
<hr/>			
Health Visitors	614	921*	2787
<hr/>			
Grand Total	1397	1695	4465
<hr/>			

* Includes cases referred by teachers or parents to Nurses or Health Visitors.

D. SUPERVISION OF INFECTIOUS DISEASE.

E. CO-ORDINATION WITH PUBLIC HEALTH SERVICE.

The arrangements under headings D. and E. are described in former reports.

VII.—Physical Condition of School Children.

A. TOTAL NUMBER EXAMINED.

(a) At Systematic Examinations.

Age.				Boys.	Girls.	Total.
Under 5 years	.....	.....		57	53	110
Age 5	„	.....	.....	589	608	1197
„ 6	„	.....	.....	111	99	210
„ 7	„	.....	.....	36	32	68
„ 8	„	.....	.....	21	25	46
„ 9	„	.....	.....	670	692	1362
„ 10	„	.....	.....	39	51	90
„ 11	„	.....	.....	12	29	41
„ 12	„	.....	.....	29	21	50
„ 13	„	.....	.....	779	749	1528
„ 14	„	.....	.....	14	15	29
„ 15	„	.....	.....	3	2	5
„ 16 and over	.....	.....		55	40	95
Total				2415	2416	4831

Grouping the total number as Entrants, Intermediates, and Leavers, the figures are :—

				Boys.	Girls.	Total.
Entrants	.....	.....	.....	814	817	1631
Intermediates	.....	.....		721	772	1493
Leavers	.....	.....	.....	880	827	1707
Total				2415	2416	4831

(b) Special Cases.

There were 6616 children examined as special cases as follows :—

Re-examination of Notified Defects	.....	.....	.....	2443
Vision Testing at age of 7 years	.....	.....	.....	1363
Re-examination of Pediculosis Cases	.....	.....	.....	1856
At the request of Parent or Teacher	.....	.....	.....	351
At the request of the School Medical Officer*	.....	.....	.....	55
Examination for Infectious Disease	.....	.....	.....	247
Examination for Mental and Physical Defect	.....	.....	.....	301
Total				6616

* Includes children boarded out by the County Council.

B. NUMBER OF CHILDREN NOTIFIED TO PARENTS AS SUFFERING FROM DEFECTS AND PEDICULOSIS.

Total number examined, 11,447.

Number Notified	Defects—%	Pediculosis—%
(a) At Systematic examinations	397	335
(b) Special cases	344	447
} 6.47		} 6.83

Number showing no defects at Systematic examinations was 258 (5.34 per cent.).

N.B.—A defective tooth, weight below the average, etc., count as defects.

C. THE NUMBER OF CHILDREN WITH NOTIFIED DEFECTS
RECEIVING ATTENTION.

		No. Improved.	Per cent.
Number Re-examined : -			
(a) At Systematic Examinations	311	163	} 67.86
(b) As Special Cases	2443	1706	
Pediculosis Cases	2110	1532	72.60

D. AND E. CLOTHING AND FOOTGEAR.

Number Ex mined.	Underclad.		Overclad.		Clothing Dirty.		Unsatis- factory Footgear.	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	2	0.08	1	0.04	3	0.12	...	
Girls 2416	2	0.08	1	0.04	6	0.24	...	
Total 4831	4	0.08	2	0.04	9	0.18	...	
Specials ...	12		1		40		10	

F. AVERAGE HEIGHTS AND WEIGHTS.

Before weighing children, boots, shoes, and heavy outer garments are removed.

The following tables show the average heights and weights of boys and girls of all ages from 3 to 16 years :

Boys.

Age.	Number Examined	Average Heights in Inches.		Average Weights in Lbs.	
		Dumfries-shire.	Anthropo-metric Standard.	Dumfries-shire.	Anthropo-metric Standard.
Under 5	57	41.45	...	40.36	...
5- 6	589	42.24	41.03	41.49	39.90
6- 7	111	45.27	44.00	45.21	44.40
7- 8	36	47.73	45.95	52.34	49.70
8- 9	21	49.17	47.05	55.93	54.90
9-10	670	50.60	49.70	60.69	60.40
10-11	39	51.45	51.84	64.72	67.50
11-12	12	53.89	53.50	69.16	72.00
12-13	29	56.32	54.99	77.37	76.70
13-14	779	58.24	56.91	87.34	82.60
14-15	14	60.62	...	96.32	...
15-16	3	62.33	...	107.91	...
over 16	55	66.78	...	125.80	...

GIRLS.

Age.	Number Examined	Average Heights in Inches.		Average Weights in Lbs.	
		Dumfries-shire.	Anthropo-metric Standard.	Dumfries-shire.	Anthropo-metric Standard.
Under 5	53	40.62	...	39.20	...
5- 6	608	41.79	40.55	40.71	39.20
6- 7	99	44.05	42.58	43.48	41.72
7- 8	32	46.47	44.45	49.84	47.50
8- 9	25	48.33	46.60	50.80	52.10
9-10	692	50.21	48.72	58.37	55.50
10-11	51	51.82	51.66	62.60	62.00
11-12	29	55.12	53.10	74.56	68.10
12-13	21	56.84	55.66	79.42	76.40
13-14	749	59.15	57.77	87.99	87.20
14-15	15	60.34	...	102.88	...
15-16	2	63.00	...	100.87	...
over 16	40	64.47	...	114.93	...

G. CLEANLINESS.

Pediculosis may be taken as a measure of this.

Number Examined.		Head.				Body.		Specials.
		Notified Cases.		Slight.				
		No.	%	No.	%	No.	%	No.
Boys	2415	56	2.31	50	2.07	1	0.04	435
Girls	2416	279	11.54	279	11.54	1	0.04	1421
Total	4831	335	6.92	329	6.80	2	0.04	1856

H. CONDITION OF THE SKIN.

(a) Head.

Number Examined.			Ringworm.		Impetigo.		Other Diseases.	
			No.	%	No.	%	No.	%
Boys	...	2415	1	0.04	17	0.70	11	0.45
Girls	...	2416	...	...	14	0.57	2	0.08
Total	...	4831	1	0.02	31	0.63	13	0.26
Specials	...		2		54		6	

(b) BODY.

Number Examined.			Ringworm.		Impetigo.		Scabies.		Other Diseases.	
			No.	%	No.	%	No.	%	No.	%
Boys	2415		2	0.08	2	0.08	13	0.53	48	1.98
Girls	2416		...	...	2	0.08	10	0.41	22	0.91
Total	4831		2	0.04	4	0.08	23	0.47	70	1.44
Specials			1		...		39		23	

I. NUTRITION.

Number Examined.	Above Average.		Average.		Below Average.		Very Bad	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	881	36.48	745	30.84	783	32.42	6	0.24
Girls 2416	894	37.00	821	33.98	694	28.72	7	0.28
Total 4831	1775	36.74	1566	32.41	1477	30.57	13	0.26
Specials ...	...		...		...		2	

J. TEETH.

Number Examined.	All Sound.		1 to 4 Decayed.		5 or more Decayed.		Oral Sepsis	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	574	23.76	1425	59.00	416	17.22	...	
Girls 2416	536	22.18	1438	59.51	442	18.29	...	
Total 4831	1110	22.97	2863	59.25	858	17.75	...	
Specials ...	...		...		2		1	

K. NOSE, THROAT, AND GLANDS.

(a) NOSE.

Number Examined				Catarrh.		Obstruction.		Other Diseases.	
				No.	%	No.	%	No.	%
Boys	...	...	2415	113	4.67	9	0.37	...	...
Girls	...	...	2416	62	2.56	8	0.33	1	0.04
Total	...	...	4831	175	3.61	17	0.35	1	0.02
Specials	...	...	...	9		22		...	

(b) THROAT.

Number Examined.	Tonsils.				Adenoids.				Other Diseases.	
	Slightly Enlarged.		Markedly Enlarged.		Probably Present.		Present.			
	No.	%	No.	%	No.	%	No.	%	No.	%
Boys 2415	379	15.69	66	2.73	29	1.20	2	0.08	1	0.04
Girls 2416	433	17.92	71	2.93	36	1.49	1	0.04	1	0.04
Total 4831	812	16.80	137	2.83	65	1.34	3	0.06	2	0.02
Specials	6		597		92		16		1	

(c) LYMPHATIC GLANDS.

Number Examined.	Palpably Enlarged.		Markedly Enlarged.		Suppurating.		Cicatrices.	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	826	34.20	5	0.20	...		24	0.99
Girls 2416	628	25.99	3	0.12	...		17	0.70
Total 4831	1454	30.05	8	0.16	...		41	0.84
Specials ...	11		61		...		...

L. EXTERNAL EYE DISEASES.

Number Examined.	Blepharitis.		Conjunctivitis.		Corneal Opacity.		Strabismus.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%	No.	%
Boys 2415	20	0.82	6	0.24	5	0.20	36	1.49	11	0.45
Girls 2416	16	0.66	3	0.12	5	0.20	38	1.57	7	0.28
Total 4831	36	0.74	9	0.18	10	0.20	74	1.53	18	0.36
Specials	53		10		6		279		23	

M. VISUAL ACUITY.

Tested in children of 7 years and over.

Number Examined.	Good, 6/6.		Fair, 6/9-6/12.		6/18 or Worse.		Bad in one Eye only.	
	No.	%	No.	%	No.	%	No.	%
Boys 2330	1043	44.76	1060	45.49	92	3.94	135	5.79
Girls 2314	931	40.23	1165	50.34	115	4.97	103	4.45
Total 4644	2974	42.49	2225	47.91	207	4.45	238	5.12
Specials ...	6		61		773		211	

The number of retinoscopies performed was 259, of which 44 children were examined by Dr Ross, of Carlisle, and 215 by the School Medical Officers.

One hundred and seventy (170) parents were notified that their children required glasses. Of these :—

- 68 declared themselves necessitous.
- 84 paid for the glasses.
- 2 prescriptions were sent to parents.
- 16 did not reply.

Of the remaining 89 retinoscopies, 44 were duplicate examinations of those referred to Dr Ross; and of the other 45 pupils about whom no letters were sent :—

- 37 did not require glasses.
- 8 did not require their glasses to be changed.

N. EARS.

Number Examined.			Otorrhœa.		Wax.		Other Diseases.	
			No.	%	No.	%	No.	%
Boys	...	2415	11	0.45	19	0.78	...	
Girls	...	2416	5	0.20	8	0.33	...	
Total	...	4831	16	0.32	27	0.55	...	
Specials	...	...	80		...		...

O. HEARING.

Number Examined.			Slightly Deaf.		Markedly Deaf.	
			No.	%	No.	%
Boy	...	2415	10	0.41	3	0.12
Girls	...	2416	9	0.37	1	0.04
Total	...	4831	19	0.39	4	0.08
Specials	...	...	7		22	

P. SPEECH.

Number Examined.			Defective Articulation.		Stammering.	
			No.	%	No.	%
Boys	...	2415	19	0.78	20	0.82
Girls	...	2416	12	0.49	1	0.04
Total	...	4831	31	0.63	21	0.43
Specials	...	...	5		3	

Q. MENTAL CONDITION.

Number Examined.	Dull or Backward.		Mentally Defective.	
	No.	%	No.	%
Boys ... 2415	44	1·82	10	0·41
Girls ... 2416	25	1·03	12	0·49
Total ... 4831	69	1·42	22	0·45
Specials ...	6		28	

There are 70 mental defectives on the roll of the special classes.

The School Medical Officers have paid 11 visits to the Dumfries class and 6 visits to the Annan class during the year.

The number of mental tests performed was 69, and 19 children were certified mentally defective.

R. HEART AND CIRCULATION.

Number Examined.	Organic Disease.				Functional Diseases.		Anæmia	
	Congenital.		Acquired.					
	No.	%	No.	%	No.	%	No.	%
Boys 2415	...		70	2·89	42	1·73	17	0·70
Girls 2416	1	0·04	34	1·40	76	3·14	25	1·03
Total 4831	1	0·02	104	2·14	118	2·43	42	0·86
Specials ...	2		183		84		45	

S. LUNGS.

Number. Examined.	Bronchitis and Catarrh.		Tuber- culosis.		Suspected Tuberculosis.		Tuberculosis Contact and other Lung Diseases.	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	63	2.60	...		8	0.33	10	0.41
Girls 2416	61	2.64	2	0.08	6	0.24	4	0.16
Total 4831	127	2.62	2	0.04	14	0.28	14	0.28
Specials ...	28		6		49		52	

T. NERVOUS SYSTEM.

Number Examined.	Epilepsy.		Chorea.		Infantil Paralysis.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	2	0.08	1	0.04	...		4	0.16
Girls 2416	5	0.20	...		1	0.04	2	0.08
Total 4831	7	0.14	1	0.02	1	0.02	6	0.12
Specials ...	2		1		15		7	

U. TUBERCULOSIS (NON-PULMONARY).

Number Examined.	Glandular.		Bones and Joints.		Abdominal.		Skin.	
	No.	%	No.	%	No.	%	No.	%
Boys 2415	1	0.04	8	0.33	3	0.12	...	
Girls 2416	3	0.12	3	0.12	2	0.08	1	0.04
Total 4831	4	0.08	11	0.22	5	0.10	1	0.02
Specials ...	15		14		22		3	

V. RICKETS.

Number Examined.	Slight.		Marked	
	No.	%	No.	%
Boys 2415	26	1·07	4	0·16
Girls 2416	12	0·49	1	0·04
Total 4831	38	0·78	5	0·10
Specials ... ..	...		1	

W. DEFORMITIES.

Number Examined.	Congenital.		Acquired (non-Rachitic).	
	No.	%	No.	%
Boys 2415	10	0·41	21	0·87
Girls 2416	8	0·33	29	1·20
Total 4831	18	0·37	50	1·03
Specials	11		8	

X. INFECTIOUS AND CONTAGIOUS DISEASES.

Number Examined.	Scarlatina.		Chicken-pox.		Whooping-cough.	
	No.	%	No.	%	No.	%
Boys 2415	1	0·04	1	0·04	...	
Girls 2416	1	0·04	1	0·04	1	0·04
Total 4831	2	0·04	2	0·04	1	0·02
Specials	1		4		1	

Y. OTHER DISEASES OR DEFECTS.

Number Examined.				Number.	Per cent.
Boys	...	...	2415	70	2·89
Girls	...	...	2416	74	3·06
Total	...	...	4831	144	3·4
Specials	...	...	...	88	...

Z. VACCINATION.

Number Examined.				No Marks.	Per cent.
Boys	...	...	2415	722	29·89
Girls	...	...	2416	747	30·91
Total	...	...	4831	1469	30·40

Appendix A.

Schools with Public Water Supplies.	W.C.'s.	Privies.
1. St. Andrew's	Yes.	...
2. Annan Academy	Yes.	...
3. Breconbeds .. ...	...	Yes.
4. Brydekirk	Yes.	...
5. St. Columba's	Yes.	...
6. Dornock ... ..	...	Yes.
7. Dumfries Academy	Yes.	...
8. Eaglesfield	Yes.	...
9. Eastriggs	Yes.	...
10. Gair ... ..	...	Yes.
11. Glencaple... ..	Yes.	...
12. Gretna Township	Yes.	...
13. Half-Morton ... ..	...	Yes.
14. High School, Dumfries	Yes.	...
15. Hoddam	Yes.	...
16. Hutton Hall ... ..	...	Yes.
17. Kelloholm	Yes.	...
18. Kirkconnel	Yes.	...
19. Kirkpatrick-Fleming	Yes.	...
20. Langholm Academy	Yes.	...
21. Lochmaben	Yes.	...
22. Lockerbie	Yes.	...
23. Loreburn-St. John's	Yes.	...
24. Maxwelltown	Yes.	...
25. St. Michael's	Yes.	...
26. Moffat	Yes.	...
27. Moniaive	Yes.	...
28. Mount Pleasant ... ..	...	Yes.
29. Noblehill	Yes.	...
30. Penpont	Yes.	...
31. Ruthwell	Yes.	...
32. Sanquhar	Yes.	...
33. Springfield	Yes.	...
34. Woodside... ..	Yes.	...
35. Tundergarth	Yes.	...

Appendix B.

Schools with a Gravitation Water Supply other than from a Public source.					W.C.'s.	Privies.
1.	Amisfield	...	...	...	...	Yes.
2.	Annan Water	...	...	...	Yes.	...
3.	Applegarth	...	...	...	Yes.	...
4.	Auldgirith...	...	...	...	...	Yes.
5.	Barndennoch	...	...	...	Yes.	...
6.	Beattock	...	...	...	Yes.	...
7.	Brownhall (Artesian)	...	...	...	...	Yes.
8.	Cairn	...	...	...	...	Yes.
9.	Canonbie	...	...	...	Yes.	...
10.	Carronbridge	...	...	...	Burn water flows through latrine.	...
11.	Catherinefield	...	...	...	...	Yes —sewage dis- posal difficult.
12.	Cogrieburn	...	...	...	Yes.	...
13.	Collin	...	...	...	Yes.	...
14.	Corrie	...	...	...	Yes.	...
15.	Crossford	...	...	...	Yes.	...
16.	Cummertrees	...	...	...	...	Yes.
17.	Davington	...	...	...	Yes.	...
18.	Dumgree	...	...	...	Yes.	...
19.	Duncow	...	...	...	...	Yes.
20.	Durisddeer...	...	...	...	Yes.	...
21.	Enterkinfoot	...	...	...	...	Yes.
22.	Eskdalemuir	...	...	...	Burn water flows through latrine.	...
23.	Evan Water	...	...	...	...	Yes.
24.	Ewes	...	...	...	Yes.	...
25.	Gatelawbridge	...	...	...	...	Yes.
26.	Gilnockie	...	...	...	Yes.	...
27.	Goodhope	...	...	...	...	Yes.
28.	Gubhill	...	...	...	...	Yes.
29.	Harelaw	...	...	...	Yes.	...
30.	Hutton	...	...	...	Yes.	...
31.	Johnstone Bridge	...	...	...	...	Yes.
32.	Mennock	...	...	...	...	Yes.
33.	Middlebie...	...	...	...	Yes.	...
34.	Morton	...	...	...	Yes.	...
35.	Mouswald	...	...	...	...	Yes.
36.	St. Mungo	...	...	...	Yes.	...
37.	Shieldhill	...	...	...	...	Yes.
38.	Sibbaldbie	...	...	...	Yes.	...
39.	Speddoch	...	...	...	Yes.	...
40.	Torthorwald	...	...	...	Yes.	...
41.	Tynron Endowed	...	...	...	...	Yes.
42.	Tynron Public	...	...	...	Yes.	...
43.	Wallace Hall	...	...	...	Yes.	...
44.	Wamphray	...	...	...	Yes.	...
45.	Wanlockhead	...	...	...	Yes.	...
46.	Wauchope	...	...	...	Yes.	...
47.	Westerkirk	...	...	...	Yes.	...

Appendix C.

Schools without Gravitation Water Supply.					W.C.'s.	Privies.
1. Birleyhill	Yes.
2. Burnhead	Yes.
3. Craigmuie	Yes.
4. Dalswinton	Yes.
5. Dalton	Yes.
6. Dunseore	Yes.
7. Garrel	Yes.
8. Glenesslin	Yes.
9. Glenzier	Yes.
10. Hightae	Yes.
11. Holywood	Yes.
12. Hottsbridge	Yes.
13. Upper Keir	Yes.
14. Megdale	Yes.
15. Nethermill	Yes.
16. Steilston	Yes.
						—situated over a burn.
17. Templand	Yes.
18. Trailtrow	Yes.

REPORT
ON
DENTAL TREATMENT

Report by the School Dentist.

1st Quarter :—August, September, and October, 1933.

*Inspection :—*Children between 5 and 10 years.

Glencaple.	Steilston.	Sibbaldbie.
Hutton Hall.	Nethermill.	Davington.
Cummertrees.	Amisfield.	Eskdalemuir.
Trailtrow.	Breconbeds.	Gretna Public.
Mount Pleasant.	Brydekirk.	Mennoek.
Hollywood.	Gretna Township.	Noblehill.
Wanlockhead.	Hoddam.	Glenzier.
Middlebie.	Garrel.	Applegarth.
Penpont.	Barndennoeh.	Keir.
Half-Morton.	Kirk.-Fleming.	St. Michael Street.

Treatment :—

Glencaple.	Steilston.	Sibbaldbie.
Hutton Hall.	Nethermill.	Davington.
Cummertrees.	Amisfield.	Eskdalemuir.
Trailtrow.	Breconbeds.	Gretna Public.
Mount Pleasant.	Brydekirk.	Mennoek.
Hollywood.	Gretna Township.	Noblehill.
Wanlockhead.		

2nd Quarter :—November and December, 1933, and January, 1934.

*Inspection :—*Children between 5 and 10 years.

Goodhope.	Moniaive.	Craigmuie.
Dunscore.	Glenesslin.	Speddloeh.
Burnhead.	Dalswinton.	Duneow.
Collin.	Torthorwald.	Tynron Endowed.
Tynron Public.	Crossford.	Catherinefield.
Loreburn-St. John's.	St. Andrew's.	

Treatment :—

St. Michael Street.	St. Andrew's.	Crossford.
Glenzier.	Kirk.-Fleming.	Half-Morton.
Applegarth.	Hoddam.	Middlebie.
Keir.	Garrel.	Penpont.
Goodhope.	Barndennoch.	Craigmuic.
Dunscore.	Moniaive.	Speddoch.
Burnhead.	Glenesslin.	Duncow.
Collin.	Dalswinton.	Tynron Endowed.
Tynron Public.	Torthorwald.	Catherinefield.

3rd Quarter :—February, March, and April, 1934.*Inspection :—*Children between 5 and 10 years.

Maxwelltown.	Brownhall.	Dornock.
Eastriggs.	Eaglesfield.	Gair.
Hottsbridge.	Lochmaben.	Wallacehall Acad.
Auldgirth.	Morton.	Woodside.
Birleyhill.	Ruthwell.	Mouswald.
Dalton.	Gatlawbridge.	Carronbridge.
Enterkinfoot.	Durisdcer.	St. Mungo.
Hightae.	Templand.	Lockerbie Acad.

Treatment :—

Loreburn-St. John's.	Maxwelltown.	Brownhall.
Dornock.	Eastriggs.	Eaglesfield.
Gair.	Hottsbridge.	Lochmaben.
Wallacehall Acad.	Auldgirth.	Morton.
Woodside.	Birleyhill.	Ruthwell.
Mouswald.	Dalton.	Gatlawbridge.
Carronbridge.	Enterkinfoot.	Durisdcer.
St. Mungo.		

4th Quarter :—May, June, and July, 1934.*Inspection :—*Children between 5 and 10 years.

Annan Academy.	St. Columba's.	Sanquhar.
Kelloholm.	Cairn.	Beattock.
Dumgree.		

Treatment :—

Annan Academy.	St. Columba's.	Sanquhar.
Kelloholm.	Cairn.	Beattock.
Dumgree.	Hightae.	Templand.
Lockerbie Academy.		

Summary of Work Done.

Number of schools visited for inspection	78
Number of schools visited for treatment	78
Number of children inspected	5756
Number of children requiring treatment	2938 (51·04%)
Number of children requiring no treatment	2818 (48·96%)

Of those requiring treatment 1724 (60·36%)
 accepted the Dentist's services. In 1132 cases treatment
 was refused, and 82 forms were not returned. Of those
 accepting treatment, 71 were absent from school at the
 time of the Dentist's visit and did not receive treatment.

In addition to the above, 161 special cases (*i.e.*, children
 not seen at the routine inspection but brought to the
 Dentist for some special reason) were treated. This makes
 a total of 1814 children receiving treatment.

The operative procedures undertaken were :—

Number of Fillings	407
Number of Extractions	3912
Number of Sealings	6